CDX-M610

SERVICE MANUAL

US Model

Ver 1.0 2001. 01

• The tuner and CD sections have no adjustments.

Model Name Using Similar Mechanism	CDX-M610
CD Drive Mechanism Type	MG-383Z-121//K
Optical Pick-up Name	KSS-720A

SPECIFICATIONS

AUDIO POWER SPECIFICATIONS

POWER OUTPUT AND TOTAL HARMONIC DISTORTION

23 watts per channel minimum continuous average power into 4 ohms, 4 channels driven from 20 Hz to 20 kHz with no more than 5% total harmonic distortion.

Other Specifications

CD player section

System	Compact disc digital audio system
Signal-to-noise ratio	90 dB
Frequency response	10 – 20,000 Hz
Wow and flutter	Below measurable limit
Laser Diode Properties	
Material	GaAlAs
Wavelength	780 nm
Emission Duration	Continuous
Laser output power	Less than 44.6 µW*

* *This output is the value measured at a distance of 200 mm from the objective lens surface on the Optical Pick-up Block.*

Tuner section

FM

Tuning range	87.5 – 107.9 MHz
Antenna terminal	External antenna connector
Intermediate frequency	10.7 MHz/450 kHz
Usable sensitivity	8 dBf
Selectivity	75 dB at 400 kHz
Signal-to-noise ratio	66 dB (stereo), 72 dB (mono)
Harmonic distortion at 1 kHz	0.6% (stereo), 0.3% (mono)
Separation	35 dB at 1 kHz
Frequency response	30 – 15,000 Hz

AM

Tuning range	530 – 1,710 kHz
Antenna terminal	External antenna connector
Intermediate frequency	10.7 MHz/450 kHz
Sensitivity	30 µV

Power amplifier section

Outputs	Speaker outputs
Speaker impedance	4 – 8 ohms
Maximum power output	52 W × 4 (at 4 ohms)

General

Outputs	Audio outputs (3) Power antenna relay control lead Power amplifier control lead
Inputs	Telephone ATT control lead Illumination control lead Treble ± 10 dB at 100 Hz
Power requirements	12 V DC car battery (negative ground)
Dimensions	Approx. 178 × 50 × 182 mm (7 1/8 × 2 × 7 1/4 in.) (w/h/d)
Mounting dimensions	Approx. 182 × 53 × 163 mm (7 1/4 × 2 1/8 × 6 1/2 in.) (w/h/d)
Mass	Approx. 1.5 kg (3 lb. 5 oz.)
Supplied accessories	Card remote commander RM-X93 Parts for installation and connections (1 set)

Design and specifications are subject to change without notice.

FM/AM COMPACT DISC PLAYER

9-870-261-11
2001A0400-1
© 2001. 1

Sony Corporation
Audio Entertainment Group
General Engineering Dept.

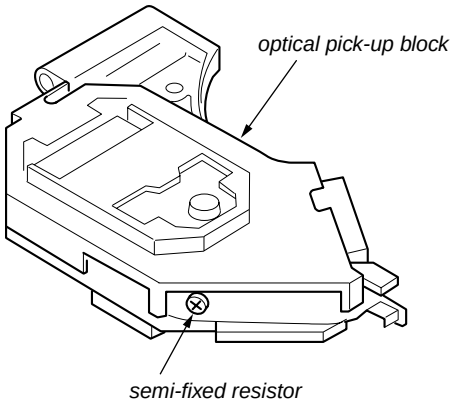
SONY®

SERVICE NOTES

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

If the optical pick-up block is defective, please replace the whole optical pick-up block.
Never turn the semi-fixed resistor located at the side of optical pick-up block.



Notes on Chip Component Replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

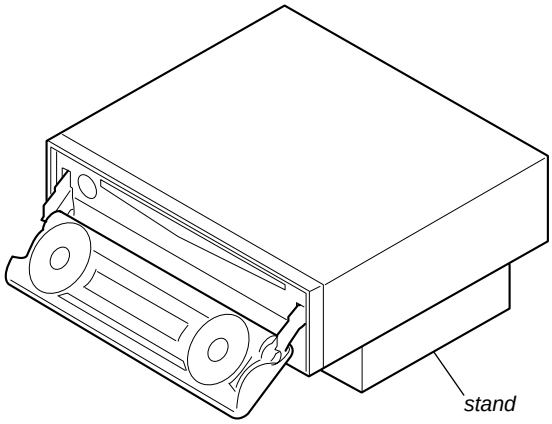
The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

NOTE FOR THE OPENING OF THE FRONT PANEL

In this set, the front panel is lowered to below the bottom face when it is opened.
When servicing the set, place it on a stand having a height of about 2 cm.



SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

TABLE OF CONTENTS

1. GENERAL

Location of controls 4
Getting Started 4
Setting the clock 5
CD Player CD/MD Unit 5
Radio 6
Other Functions 7
TV/Video 8
Connections 10

2. DISASSEMBLY

2-1. Front Panel Assy (Normal) 13
2-2. Front Panel Assy (Inoperative) 14
2-3. CD Mechanism Block, Front Panel Assy 14
2-4. Sub Panel (CD) Sub Assy 15
2-5. Motor Block Assy, Cam (R) Assy 15
2-6. Main Board 16
2-7. Heat Sink 16
2-8. Chassis (T) Sub Assy 17
2-9. Lever Section 17
2-10. Servo Board 18
2-11. Shaft Roller Assy 18
2-12. Floating Block Assy 19
2-13. Optical Pick-up Block 19

3. PHASE ALIGNMENT

3-1. Arm (A-L) Assy, Arm (B-L) Assy 20
3-2. Cam (L) 20
3-3. Motor Block 21
3-4. Alignment between Arm (A-L) Assy and Arm (B-L) Assy 21
3-5. Arm (A-R) Assy, Arm (B-R) Assy 22
3-6. Cam (R) 22

4. DIAGRAMS

4-1. IC Pin Descriptions 23
4-2. Block Diagram –CD Section– 32
4-3. Block Diagram –Tuner Section– 33
4-4. Block Diagram –Display Section– 34
4-5. Circuit Boards Location 35
4-6. Printed Wiring Boards –CD Mechanism Section– 36
4-7. Schematic Diagram –CD Mechanism Section (1/2)– 38
4-8. Schematic Diagram –CD Mechanism Section (2/2)– 38
4-9. Printed Wiring Boards –Main Section– 40
4-10. Schematic Diagram –Main Section (1/4)– 42
4-11. Schematic Diagram –Main Section (2/4)– 43
4-12. Schematic Diagram –Main Section (3/4)– 44
4-13. Schematic Diagram –Main Section (4/4)– 45
4-14. Printed Wiring Board –Sub Section– 46
4-15. Schematic Diagram –Sub Section– 47
4-16. Printed Wiring Board –Display Section– 48
4-17. Schematic Diagram –Display Section– 49

5. EXPLODED VIEWS

5-1. Chassis Section 52
5-2. Main Board Section 53
5-3. Front panel Section 54
5-4. CD Mechanism Section (1) 55
5-5. CD Mechanism Section (2) 56
5-6. CD Mechanism Section (3) 57

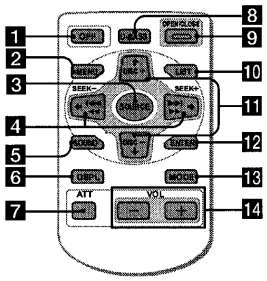
6. ELECTRICAL PARTS LIST 58

SECTION 1
GENERAL

This section is extracted from instruction manual.

Location of controls

Card remote commander



Refer to the pages listed for details.

1 **OFF button 8, 10**

2 **MENU button 9, 12, 13, 14, 15, 16, 17, 18, 23, 24, 25, 27**

3 **SOURCE (TUNER/CD/MD/TV) button 8, 10, 11, 14, 16, 17, 24, 25, 27**

4 **←/→ (SEEK/AMS –/+) buttons 8, 9, 11, 12, 15, 16, 17, 22, 24, 25, 27**
Automatic Music Sensor (I◄◄ / ►►I) 11
Manual Search (◄◄/►►) 11
Seek 16, 25

5 **SOUND button 22**

6 **DSPL (display mode change) button 10, 11, 13, 18**

7 **ATT (attenuate) button 22**

8 **D-BASS button 23**

9 **OPEN/CLOSE button 10**

10 **LIST button 13, 14, 18, 19, 26**
List-up 14, 19, 26

11 **↑/↓ (PRST/DISC +/–) buttons 8, 9, 11, 12, 13, 14, 15, 17, 18, 19, 23, 24**
During CD/MD playback:
Disc change 11
During radio reception:
Preset stations select 17
During TV reception:
Band select 25

12 **ENTER button 9, 11, 13, 14, 15, 16, 17, 18, 19, 23, 25, 27**

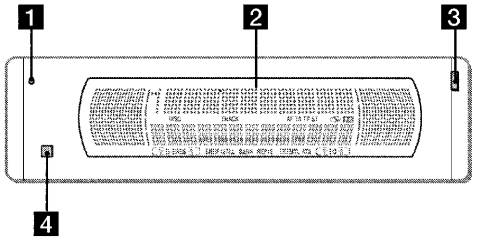
13 **MODE button 10, 14, 16, 17, 24, 27**
During CD/MD playback:
CD/MD unit select 10, 14
During radio reception:
BAND select 16, 17
During TV reception:
Unit select 24

14 **VOL (volume adjust) buttons**

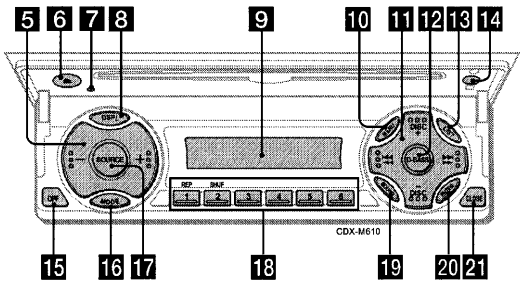
A unit turned off by pressing (OFF) for two seconds cannot be operated with the card remote commander unless (SOURCE) on the unit is pressed or a CD is inserted to activate the unit first.

Location of controls

Security side



Operation side



5 6

The corresponding buttons of the unit control the same functions as those on the card remote commander.

1 7 **Reset button 8**

2 **Main display window**

3 **OPEN button**

4 14 **Receptor for the card remote commander**

5 **Volume adjust buttons**

6 **⏏ (eject) button 10**

8 **DSPL (display mode change) button**

9 **Sub display window**

10 **MENU button**

11 **DISC/PRST +/– (cursor up/down) buttons**
SEEK/AMS –/+ (cursor left/right) buttons 16

12 **D-BASS button**

13 **LIST button**

15 **OFF button* 8**

16 **MODE button**

17 **SOURCE button**

18 **Number buttons**
During radio reception:
Preset number select 16, 17
During CD/MD playback:
① **REP 12**
② **SHUF 12**
During TV reception:
Preset number select 25

19 **SOUND button**

20 **ENTER button**

21 **CLOSE button**

*** Warning when installing in a car without ACC (accessory) position on the ignition key switch**
Be sure to press (OFF) on the unit for two seconds to turn off the clock display after turning off the engine.
When you press (OFF) only momentarily, the clock display does not turn off and this causes battery wear.

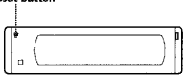
7 8

Getting Started

Resetting the unit

Before operating the unit for the first time or after replacing the car battery, you must reset the unit.
Press the reset button with a pointed object, such as a ball-point pen.

Reset button



Note
Pressing the reset button will erase the clock setting and some memorized functions.

Turning the unit on/off

Turning on the unit

Press (SOURCE) or insert a CD in the unit. For details on operation, refer to page 10 (CD/MD) and page 16 (radio).

Turning off the unit

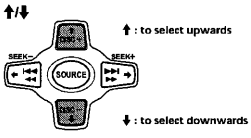
Press (OFF) to stop CD/MD playback or FM/AM reception (the key illumination and display remains on.)
Press (OFF) for two seconds to completely turn off the unit.

Note
If your car has no ACC position on the ignition key switch, be sure to turn the unit off by pressing (OFF) for two seconds to avoid car battery wear.

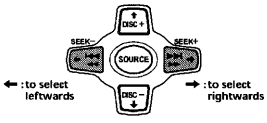
How to use the menu

This unit is operated by selecting items from a menu.
To select, first enter the menu mode and choose ↑/↓ (up/down), or choose ←/→ (left/right).

↑/↓



←/→

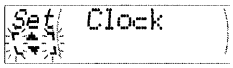


Setting the clock

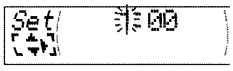
The clock uses a 12-hour digital indication.

Example: To set the clock to 10:08

1 Press (MENU), then press ↑ or ↓ repeatedly until "Clock" appears.

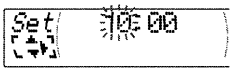


❶ Press (ENTER).

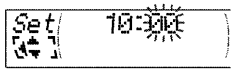


The hour indication flashes.

❷ Press ↑ or ↓ to set the hour.

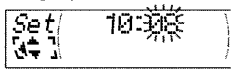


❸ Press ➡.

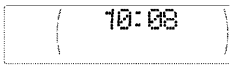


The minute indication flashes.

❹ Press ↑ or ↓ to set the minute.



2 Press (ENTER).



The clock starts.

Note
In the initial setting, the clock indication appears while the unit is turned off.
When the D.Info mode is set to "on," the time is always displayed (except for some functions of SA mode) (page 22).

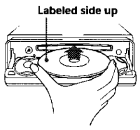
CD Player CD/MD Unit (optional)

In addition to playing a CD with this unit alone, you can also control external CD/MD units.
If you connect an optional CD unit with the CD TEXT function and the custom file function, the CD TEXT information will appear in the display when you play a CD TEXT disc.

Listening to a CD

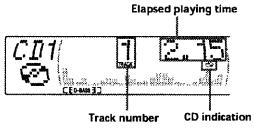
(with this unit only)

1 Press (OPEN/CLOSE) of the card remote commander and insert the CD.
Playback starts automatically.



2 Press (OPEN/CLOSE) of the card remote commander to close the front panel.

If a CD is already inserted, press (SOURCE) repeatedly until "CD" appears to start playback.



Note
To play back an 8 cm (3 in.) CD, use the optional Sony compact disc single adapter (CSA-8).

When the last track on the CD is over

The track number indication returns to "1," and playback restarts from the first track of the CD.

To	Press
Stop playback	(OFF)
Eject the CD	(OPEN/CLOSE) then ⏏

Playing a CD or MD (with optional CD/MD unit)

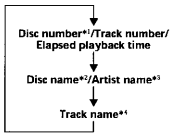
1 Press (SOURCE) repeatedly to select "CD" or "MD."

2 Press (MODE) until the desired unit appears.
CD/MD playback starts.

All the discs in the current CD/MD unit is played from the top.

Changing the display item

Each time you press (DSPL) during CD, CD TEXT disc or MD playback, the item changes as follows:



*1 *While an optional CD/MD unit is connected.*
*2 *If you have not labeled the CD or CD TEXT disc ("Labeling a CD" page 13), or if there is no disc name prerecorded on the MD, "NO D.Name" appears momentarily in the display.*
*3 *If you play a CD TEXT disc, the artist name appears in the display after the disc name. (Only for CD TEXT discs with the artist name.)*
*4 *If the track name of a CD TEXT disc or MD is not prerecorded, "NO T.Name" appears momentarily in the display.*

After you select the desired item, the display will automatically change to the Motion Display mode after a few seconds.
In the Motion Display mode, all the items are scrolled in the display one by one in order.

Note
If you use personalized labels, they will always take priority over the original CD TEXT information when such information is displayed.

Tip
The Motion Display mode can be turned off. (See "Changing the sound and display settings" on page 22).

Automatically scrolling a disc name — Auto Scroll

If the disc name, artist name, or track name on an MD or a CD TEXT disc exceeds 10 characters and the Auto Scroll function is on, information automatically scrolls across the display as follows:
- *The disc name appears when the disc has changed (if the disc name is selected as the display item).*
- *The track name appears when the track has changed (if the track name is selected as the display item).*
- *The disc or track name appears depending on the setting when you press (SOURCE) to select an MD or CD TEXT disc.*

If you press (DSPL) to change the display item, the disc or track name of the CD TEXT disc or MD is scrolled automatically whether you set the function on or off.

1 During playback, press (MENU).

2 Press ↑ or ↓ repeatedly until "A.Scrl" appears.

3 Press ➡ to select "A.Scrl on."

4 Press (ENTER).

To cancel Auto Scroll, select "A.Scrl off" in step 3.

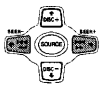
Note
For some CD TEXT discs with very many characters, the following cases may happen:
— Some of the characters are not displayed.
— Auto Scroll does not work.

Locating a specific track — Automatic Music Sensor (AMS)

During playback, press ⬅ or ➡ momentarily for each track you want to skip.

Locating a specific point in a track — Manual Search

During playback, press and hold ⬅ or ➡. Release when you have found the desired point.



Note
If "L-L L-L" or "7-7 7-7" appears in the display, you have reached the beginning or the end of the disc and you cannot go any further.

Locating a disc — Disc Selection

When an optional CD/MD unit is connected, press ↑ or ↓ to select the desired disc.

↑ (DISC +) : For succeeding discs

↓ (DISC –) : For preceding discs

The desired disc in the current optional CD/MD unit begins playback.

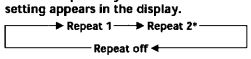
Playing tracks repeatedly — Repeat Play

The CD in the main unit will automatically repeat itself when it reaches the end. For repeat play, you can select:
- Repeat 1 – to repeat a track.
- Repeat 2 – to repeat a disc in the optional CD/MD unit.

1 During playback, press (MENU).

2 Press ↑ or ↓ repeatedly until "Repeat" appears.

3 Press ➡ repeatedly until the desired setting appears in the display.



** "Repeat 2" is only available when you connect one or more optional CD units, or when you connect the optional MD units.*

Repeat Play starts.

To return to normal play mode, select "Repeat off" in step 3.

Tip
If you select the mode using the buttons on the unit, press ① (REP) repeatedly until the desired mode appears.

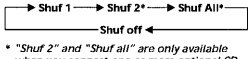
Playing tracks in random order — Shuffle Play

You can select:
- Shuf 1 – to play the tracks on the current disc in random order.
- Shuf 2 – to play the tracks in the current optional CD/MD unit in random order.
- Shuf all – to play all the tracks in all the optional CD/MD units in random order.

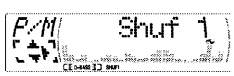
1 During playback, press (MENU).

2 Press ↑ or ↓ repeatedly until "Shuf" appears.

3 Press ➡ repeatedly until the desired setting appears in the display.



** "Shuf 2" and "Shuf all" are only available when you connect one or more optional CD units, or when you connect the optional MD units.*



Shuffle Play starts.

To return to normal play mode, select "Shuf off" in step 3.

Tip
If you select the mode using the buttons on the unit, press ② (SHUF) repeatedly until the desired mode appears.

Labeling a CD — Disc Memo

(For a CD unit with the custom file function)

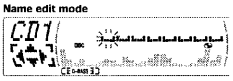
You can label each disc with a personalized name. You can enter up to eight characters for a disc. If you label a CD, you can locate the disc by name (page 14) and select the specific tracks for playback (page 15).

1 Start playing the disc you want to label.

2 Press (MENU), then press ↑ or ↓ repeatedly until "Name Edit" appears.

3 Press (ENTER).

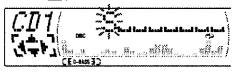
Name edit mode



4 Enter the characters.

❶ Press ↑ repeatedly to select the desired characters.

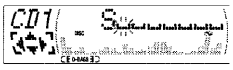
(A → B → C → ··· Z → 0 → 1 → 2 → ··· 9 → + → − → * → / → \ → > → < → . → ␣)



If you press ↓ repeatedly, the characters will appear in reverse order.
If you want to put a blank space between characters, select "␣."

❷ Press → after locating the desired character.

The next character flashes.



If you press ←, the previous character flashes.

❸ Repeat steps ❶ and ❷ to enter the entire name.

5 To return to normal CD play mode, press (ENTER).

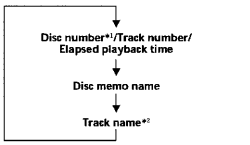
Tips

- *To erase or correct a name, enter "␣" for each character.*
- *There is another way to start labeling a CD. Press (LIST) for two seconds instead of steps 2 and 3. You can also complete the operation by pressing (LIST) for two seconds instead of step 5.*

Displaying the disc memo

Press (DSPL) during CD or CD TEXT disc playback.

Each time you press (DSPL) during CD or CD TEXT disc playback, the item changes as follows:



*1 While an optional CD unit is connected.
*2 If you connect an optional CD unit with the CD TEXT function, the CD TEXT information will appear in the display when you play a CD TEXT disc.

Note

Do not use the Custom file feature while driving, or perform any other function which could divert your attention from the road.

Erasing the disc memo

1 Press (SOURCE) repeatedly to select "CD."

2 Press (MODE) repeatedly to select the CD unit with the custom file function.

3 Press (MENU), then press ↑ or ↓ repeatedly until "Name Del" appears.

4 Press (ENTER).

5 Press ↑ or ↓ repeatedly to select the disc name you want to erase.

6 Press (ENTER) for two seconds.

The name is erased.
Repeat steps 5 and 6 if you want to erase other names.

7 Press (MENU) twice.

The unit returns to normal CD play mode.

Notes

- *When a personalized label is erased, the original CD TEXT information will appear in the display.*
- *When you erase all of the disc names, "No Data" appears in step 6.*

Locating a disc by name

— List-up (For a CD unit with the custom file function or an MD unit)

You can use this function for discs that have been assigned a custom name. For more information on disc memo names, refer to "Labeling a CD" (page 13).

1 Press (LIST).

The name assigned to the current disc appears in the display.

When you assign a disc memo name to a CD TEXT disc, it takes priority over the original CD TEXT information.

2 Press ↑ (DISC +) or ↓ (DISC −) repeatedly until you find the desired disc.

3 Press (ENTER) to play the disc.

Notes

- *The track names are not displayed during CD TEXT disc or MD playback.*
- *If there are no discs in the magazine, "NO Disc" appears in the display.*
- *If a disc has not been assigned a custom file, "********" appears in the display.*
- *If the disc information has not been read by the unit, "?" appears in the display. To load a disc, first press the number button, then choose the disc that has not been loaded.*
- *Some letters cannot be displayed during CD TEXT disc or MD playback.*
- *If an optional TV system is connected, the disc memo name appears in the display of the TV system but not in the unit's display.*

Selecting specific tracks for playback — Bank

(For a CD unit with the custom file function)

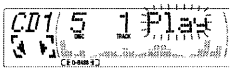
If you label the disc, you can set the unit to skip or play the tracks of your choice.

1 Start playing the disc you want to label.

2 Press (MENU), then press ↑ or ↓ repeatedly until "Bank Sel" appears.

3 Press (ENTER).

Bank edit mode



4 Label the tracks.

❶ Press ← or → repeatedly to select the track you want to label.

❷ Press (ENTER) repeatedly to select "Play" or "Skip."

5 Repeat step 4 to set "Play" or "Skip" for all the tracks.

6 Press (MENU) twice.

The unit returns to normal CD play mode.

Notes

- *You can set "Play" and "Skip" for up to 24 tracks.*
- *You cannot set "Skip" for all the tracks on a CD.*

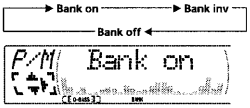
Playing specific tracks only

You can select:

- "Bank on" — to play the tracks with the "Play" setting.
- "Bank inv" (Inverse) — to play the tracks with the "Skip" setting.

1 During playback, press (MENU), then press ↑ or ↓ repeatedly until "Bank" appears.

2 Press → repeatedly until the desired setting appears.



3 Press (ENTER).

Playback starts from the track following the current one.

To return to normal play mode, select "Bank off" in step 2.

Radio

Memorizing stations automatically

— Best Tuning Memory (BTM)

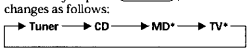
The unit selects the stations with the strongest signals and memorizes them in the order of their frequencies. You can store up to six stations on each band (FM1, FM2, FM3, AM1, and AM2).

Caution

When tuning in stations while driving, use Best Tuning Memory to prevent accidents.

1 Press (SOURCE) repeatedly to select the tuner.

Each time you press (SOURCE), the source changes as follows:



* *If the corresponding optional equipment is not connected, this item will not appear.*

2 Press (MODE) repeatedly to select the band.

Each time you press (MODE), the band changes as follows:

3 Press (MENU), then press ↑ or ↓ repeatedly until "BTM" appears.

4 Press (ENTER).

The unit stores stations in the order of their frequencies on the number buttons.
A beep sounds when the setting is stored.

Notes

- *The unit does not store stations with weak signals. If only a few stations can be received, some number buttons will retain their former setting.*
- *When a number is indicated in the display, the unit starts storing stations from the one currently displayed.*
- *If a CD is not in the unit, only the tuner band appears even if you press (SOURCE).*

Memorizing only the desired stations

You can preset up to 18 FM stations (6 each for FM1, FM2, and FM3), up to 12 AM stations (6 each for AM1 and AM2) in the order of your choice.

1 Press (SOURCE) repeatedly to select the tuner.

2 Press (MODE) repeatedly to select the band.

3 Press ⏮ or ⏭ of the unit to tune in the station that you want to store on the number button.

4 Press the desired number button (① to ⑥) of the unit until "MEM" appears.

The number button indication appears in the display.

Note

If you try to store another station on the same number button, the previously stored station will be erased.

Receiving the memorized stations

1 Press (SOURCE) repeatedly to select the tuner.

2 Press (MODE) repeatedly to select the band.

3 Press ↑ (preset up) or ↓ (preset down) repeatedly to receive the stations in the order they are stored in the memory.

Tip
If you memorizing the station using the buttons of the unit, press the number button ((1) to (6)) on which the desired station is stored.

If you cannot tune in a preset station

Press ← or → to search for the station (automatic tuning).
Scanning stops when the unit receives a station. Press ← or → repeatedly until the desired station is received.

Note
If the automatic tuning stops too frequently, press (MENU), then press ↑ or ↓ repeatedly until "Local" (local seek mode) is displayed. Then press → to select "Local on." Press (ENTER). Only the stations with relatively strong signals will be tuned in.

Tips
- *When you select the "Local on" setting, "LCL Seek" appears while the unit is searching for a station.*
- *If you know the frequency of the station you want to listen to, press and hold ← or → until the desired frequency appears (manual tuning).*

If FM stereo reception is poor — Monaural Mode

1 During radio reception, press (MENU), then press ↑ or ↓ repeatedly until "Mono" appears.

2 Press → until "Mono on" appears.
The sound improves, but becomes monaural ("ST" disappears).

3 Press (ENTER).

To return to normal mode, select "Mono off" in step 2.

If FM stereo broadcast becomes monaural

If interference occurs, the "IF Auto" function of this unit will automatically avoid noise and narrow the reception frequency. In such cases, some FM stereo broadcasts may become monaural. If you would like to hear such broadcasts in stereo, manually switch to the "Wide" setting.

1 During radio reception, press (MENU), then press ↑ or ↓ repeatedly until "IF Auto" appears.

2 Press → until "Wide" appears.

3 Press (ENTER).

Note
When you widen the frequency signal reception setting ("Wide" mode), some interference may occur.

Storing the station names — Station Memo

You can assign a name to each radio station and store it in memory. The name of the station currently tuned in appears in the display. You can assign a name of up to eight characters for a station.

Storing the station names

1 Tune in a station whose name you want to store.

2 Press (MENU), then press ↑ or ↓ repeatedly until "Name edit" appears.

3 Press (ENTER).

4 Enter the characters.
❶ Press ↑ repeatedly to select the desired characters.
(A → B → C → ··· Z → 0 → 1 → 2 → ··· 9 → + → − → * → / → \ → > → < → . → ␣)

If you press ↓ repeatedly, the characters appear in the reverse order.
If you want to put a blank space between characters, select "␣."

❷ Press → after locating the desired character.
The next character flashes.

If you press ←, the previous character flashes.

❸ Repeat steps ❶ and ❷ to enter the entire name.

5 To return to the normal radio reception, press (ENTER).

Tips
- *To erase or correct a name, enter "␣" (underbar) for each character.*
- *There is another way to start storing station names. Press (LIST) for two seconds instead of steps 2 and 3. You can also complete the operation by pressing (LIST) for two seconds instead of step 5.*

Displaying the station name

Press (DSPL) during radio reception.

Each time you press (DSPL), the item changes as follows:

Station name* → Frequency

** If the station name of a station is not stored, "NO Name" appears in the display for one second.*

Erasing the station name

1 Tune in a station you want to erase.

2 Press (MENU), then press ↑ or ↓ repeatedly until "Name Del" appears.

3 Press (ENTER).

4 Press ↑ or ↓ to select the station name you want to erase.

5 Press (ENTER) for two seconds.
The name is erased.
Repeat steps 1 through 4 if you want to erase other names.

6 Press (MENU) twice.
The unit returns to the normal radio reception mode.

Note
When you erase all of the station names, "NO Data" appears in step 5.

Locating a station by name — List-up

1 Press (LIST) momentarily.
The name assigned to the station currently tuned appears in the display.

2 Press ↑ or ↓ repeatedly until you find the desired station.
When no name is assigned to the selected station, the frequency appears in the display.

3 Press (ENTER) to tune in the desired station.

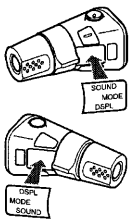
Note
When you connect a TV tuner, the list-up indication will not appear in the display of the unit.

Other Functions

You can also control the unit with a rotary commander (optional).

Labeling the rotary commander

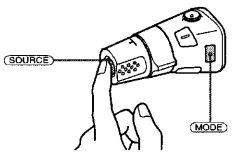
Depending on how you mount the rotary commander, attach the appropriate label as shown in the illustration below.



Using the rotary commander

The rotary commander works by pressing buttons and/or rotating controls.
You can also control an optional CD/MD unit with the rotary commander.

By pressing buttons (the SOURCE and MODE buttons)



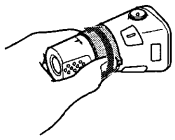
Each time you press (SOURCE), the source changes as follows:
Tuner → CD → MD* → TV*

** If the corresponding optional equipment is not connected, these items will not appear.*

Pressing (MODE) changes the operation in the following ways:
- **Tuner: FM1 → FM2 → FM3 → AM1 → AM2**
- **CD unit: CD1 → CD2 → ...**
- **MD unit*: MD1 → MD2 → ...**
- **TV/Video*: TV1 → TV2 → AUX**

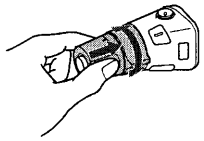
** If the corresponding optional equipment is not connected, the item will not appear.*

By rotating the control (the SEEK/AMS control)



Rotate the control momentarily and release it to:
- Locate a specific track on a disc. Rotate and hold the control until you locate the specific point in a track, then release it to start playback.
- Tune in stations automatically. Rotate and hold the control to find a specific station.

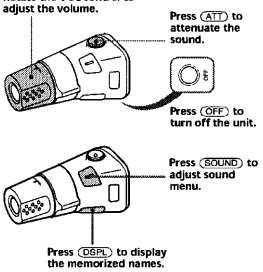
By pushing in and rotating the control (the PRESET/DISC control)



Push in and rotate the control to:
- Receive the stations memorized on the number buttons.
- Change the disc.

Other operations

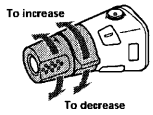
Rotate the VOL control to adjust the volume.


Press (ATT) to attenuate the sound.
Press (OFF) to turn off the unit.
Press (SOUND) to adjust sound menu.
Press (DSPL) to display the memorized names.

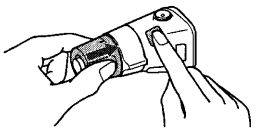
Tip
If your car has no ACC (accessory) position on the ignition key switch, be sure to press (OFF) for two seconds to turn off the clock indication after turning off the engine.

Changing the operative direction

The operative direction of controls is factory-set as shown below.



If you need to mount the rotary commander on the right hand side of the steering column, you can reverse the operative direction.



Press (SOUND) for two seconds while pushing the VOL control.

Tip
You can also change the operative direction of these controls with the unit (see "Changing the sound and display settings" on page 22).

Adjusting the sound characteristics

You can adjust the bass, treble, balance, and fader.
You can store the bass and treble levels independently for each source.

1 Select the item you want to adjust by pressing (SOUND) repeatedly.
Each time you press (SOUND), the item changes as follows:
BAS (bass) → TRE (treble) → BAL (left-right) → FAD (front-rear) → SUB (subwoofer)

2 Adjust the selected item by pressing ← or →.
When adjusting with the rotary commander, press (SOUND) and rotate the VOL control.

Note
Adjust within three seconds after selecting the item.

Attenuating the sound

Press (ATT) on the card remote commander or rotary commander .
"ATT on" appears momentarily.

To restore the previous volume level, press (ATT) again.

Tip
When the interface cable of a car telephone is connected to the ATT lead, the unit decreases the volume automatically when a telephone call comes in (Telephone ATT function).

Changing the sound and display settings

The following items can be set:

Set (Setting)
- Clock (page 9)
- Beep — to turn the beeps on or off.
- RM (Rotary Commander) — to change the operative direction of the controls of the rotary commander.
  — Select "norm" to use the rotary commander as the factory-set position.
  — Select "rev" when you mount the rotary commander on the right side of the steering column.
- English/French/Spanish — to change the display language to English, French, or Spanish.

Dis (Display)
- D.Info (Dual Information) — to display the clock and the play mode at the same time (on) or to display the information alternately (off).
- SA (Spectrum Analyzer) — to change the display pattern of the equalizer display (page 24).
- Dimmer — to change the brightness of the display (When the illumination cord connected).
  — Select "Auto" to dim the display only when you turn the lights on.
  — Select "on" to dim the display.
  — Select "off" to deactivate Dimmer.
- Contrast — to adjust the contrast if the indications in the display are not recognizable because of the unit's installed position.
- M.Dspl (Motion Display) — to turn the motion display on or off.
- A.Scrl (Auto Scroll) (page 11)

Snd (Sound)
- HPF (High pass filter for the pre-output) — to select the cut-off frequency of the pre-output.
- LPF (Low pass filter for the subwoofer output) — to select the cut-off frequency of the subwoofer output.

1 Press (MENU).

2 Press ↑ or ↓ repeatedly until the desired item appears.
Each time you press ↓, the item changes as follows:
Example
Clock → Beep → RM → English/French/Spanish → D.Info → SA → Dimmer → Contrast → M.Dspl → A.Scrl* → HPF → LPF

** When no CD or MD is playing, this item will not appear.*

Note
The displayed item will differ depending on the source.

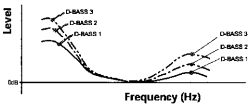
Tip
You can easily switch among categories ("Set," "Snd," "P/M" (Play Mode) and "Dis") by pressing ↑ or ↓ for two seconds.

3 Press → to select the desired setting (Example: on or off) or press ← or → repeatedly to select the frequency (Example: off, 78 Hz or 125 Hz).
For the "Contrast" setting, pressing → makes the contrast higher, and pressing ← makes the contrast lower.

4 Press (ENTER).
After the mode setting is completed, the display returns to normal play mode.

Boosting the bass sound
— D-bass

You can enjoy a clear and powerful bass sound.
The D-bass function boosts the low and high frequency signal with a sharper curve than conventional bass boost.
You can hear the bass line more clearly even while the vocal volume remains the same. You can emphasize and adjust the bass sound easily with the D-BASS button.



Adjusting the bass curve

Press (D-BASS) repeatedly to select the desired bass curve.
As the D-BASS number increases so does the effect.

D-BASS 1 → D-BASS 2 → D-BASS 3 → D-BASS off

Note
The bass sound may distort at same volume. If the bass sound distorts, select less effective bass curve.

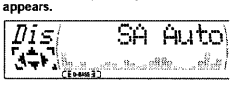
Selecting the spectrum analyzer

The sound signal level is displayed on a spectrum analyzer. You can select a display pattern from 1 to 6, or the automatic display mode.

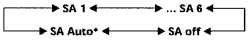
1 Press (SOURCE) to select a source (tuner, CD, or MD).

2 Press (MENU).

3 Press ↑ or ↓ repeatedly until "SA" appears.



4 Press ← or → repeatedly to select the desired setting.



** All of these display patterns appear one by one automatically.*

5 Press (ENTER).

With Optional Equipment

TV/Video

You can connect an optional TV tuner and TV monitor to this unit.

Watching the TV

1 Press (SOURCE) repeatedly until "TV" appears.

2 Press (MODE) repeatedly to select the desired TV band.

Watching a video

1 Press (SOURCE) repeatedly until "TV" appears.

2 Press (MODE) repeatedly to select "AUX."
Play the video.

Notes
- *"AUX 2" appears if the VIDEO 2 terminal of the TV monitor is selected.*
- *The indication automatically switched to "AUX 1" soon after "AUX" is displayed.*

Memorizing TV channels automatically

The unit selects the TV channels with the strongest signals and memorizes them in the order of their frequency.

Caution
When tuning in a station while driving, use Best Tuning Memory to prevent accidents.

1 **Press (SOURCE) repeatedly until "TV" appears.**

2 **Press (MENU), then press ↑ or ↓ until "Auto Mem" appears.**

3 **Press (ENTER).**
The unit stores TV channels in the order of their frequencies on the number buttons.
A beep sounds when the setting is stored.

Notes
- *The unit does not store TV channels with weak signals. If only a few TV channels can be received, some number buttons will remain empty.*
- *When a preset number is indicated in the display, the unit starts storing TV channels from the one currently displayed.*

Memorizing only the desired TV channels

You can store up to 12 channels (six each for TV1 and TV2) on the number buttons in the order of your choice.

1 **Press (SOURCE) repeatedly until "TV" appears.**

2 **Press ← or → to tune in the TV channel you want to store on each number button.**

3 **Press and hold the desired number button (1 to 6) of the unit until you hear a beep sound.**
The number button indication and "Mem" appear in the display.

Note
If you try to store another channel on the same number button, the previously stored channel will be erased.

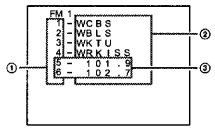
Storing the TV channel names

Follow the steps in "Storing the station names" (page 18).

Displaying the TV or radio station names

Press (LIST) during TV or radio reception.

Example: When receiving the FM1 band



① **Preset numbers**
② **Stored station names**
③ **Frequencies***
* *If the name of a station is not stored, the frequency of that station will be displayed instead.*

Notes
- *It may take some time before all indications appear in the display.*
- *The TV channel does not appear during list display.*
- *The contents of the preset memory cannot be listed when the unit is in simultaneous play mode (page 27).*

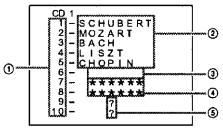
Turning off the display

During radio reception, press (LIST) again.
During TV reception, the list display on the TV monitor will automatically turn off after a few seconds.

Displaying the information stored on discs

Press (LIST) during CD/MD playback.

Example: When CD unit 1 is selected.



① **Disc numbers**
② **Titles stored as custom files**
③ **No disc is loaded*1**
④ **No stored titles*2**
⑤ **TOC information has not been identified yet*3**
*1 *A blank space is displayed next to a disc number represents empty slots in the disc magazine.*
*2 *If a title is not registered in the custom file, "******" is displayed.*
*3 *If the disc information has not yet been read by the unit, "?" is displayed.*

Notes
- *It may take some time before all indications appear in the display.*
- *The TV channel does not appear during list display.*
- *The contents of the preset memory cannot be listed when the unit is in the simultaneous play mode.*

Turning off the display

Press (LIST) again.

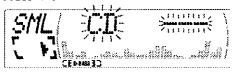
Watching the TV or video while listening to a CD or MD — Simultaneous Play

The simultaneous play function does not work while you are listening to the radio.

1 **Press (MENU), then press ↑ or ↓ repeatedly until "Simul Sel" appears.**

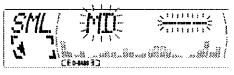
2 **Press (ENTER).**

3 **Press ←.**



4 **Press (SOURCE) repeatedly to select CD or MD.**

5 **Press →.**



6 **Press (SOURCE) repeatedly until "TV" appears, then press (MODE) repeatedly to select a TV or video.**
Each time you press (MODE), the item changes as follows:
TV 1 → TV 2 → V 1 (VIDEO 1)

7 **Press (ENTER).**
Simultaneous Play starts.

If you are already watching the TV or video and want to listen to a CD or MD as well, follow the same steps.

Returning to normal mode

To cancel the CD or MD, select "– – –" in step 4.

To cancel the TV or video, select "– – –" in step 6.

Note
If you press ⏏ (EJECT) on a CD/MD unit while the unit is in simultaneous play mode, Simultaneous Play is canceled.

Connections

Cautions

- This unit is designed for negative ground 12 V DC operation only.
- Be careful not to pinch any wires between the screw and the body of the car, or this unit, or between any moving parts such as the seat railing, etc.
- Connect the **yellow** and **red** power input leads only after all other leads have been connected.
- Be sure to connect the red power input lead to the positive 12 V power terminal which is energized when the ignition key is in the accessory position.
- **Run all ground wires to a common ground surface.**
- Connect the yellow cord to a free car circuit rated higher than the unit's fuse rating. If you connect this unit in series with other stereo components, the car circuit they are connected to must be rated higher than the sum of the individual component's fuse rating. If there are no car circuits rated as high as the unit's fuse rating, connect the unit directly to the battery. If no car circuits are available for connecting this unit, connect the unit to a car circuit rated higher than the unit's fuse rating in such a way that if the unit blows its fuse, no other circuits will be cut off.
- When installing a car without ACC (accessory) position on the ignition key switch, connect the red power input lead to the + 12 V power terminal which is energized at all times with the yellow lead.
- The use of optical instruments with this product will increase eye hazard.

Warning when installing in a car without ACC (accessory) position on the ignition key switch

Be sure to press (OFF) on the unit for two seconds to turn off the clock display after turned off the engine.
When you press (OFF) momentarily, the clock display does not turn off and this causes battery wear.

Reset button

When the installation and connections are over, be sure to press the reset button with a ball-point pen, etc.

Notes on the control and power supply leads
- *The power antenna control lead (blue) supplies +12 V DC when you turn on the tuner.*
- *When your car has built-in FM/AM antenna in the rearlside glass, it is necessary to connect the power antenna control lead (blue) or the accessory power input lead (red) to the power terminal of the existing antenna booster. For details, consult your dealer.*
- *A power antenna without relay box cannot be used with this unit.*

Memory hold connection
When the yellow power input lead is connected, power will always be supplied to the memory circuit even when the ignition key is turned off.

Notes on speaker connection
- *Before connecting the speakers, turn the unit off.*
- *Use speakers with an impedance of 4 to 8 ohms, and with adequate power handling capacities. Otherwise, the speakers may be damaged.*
- *Do not connect the terminals of the speaker system to the car chassis, and do not connect the terminals of the right speaker with those of the left speaker.*
- *Do not attempt to connect the speakers in parallel.*
- *Do not connect any active speakers (with built-in amplifiers) to the speaker terminals of the unit. Doing so may damage the active speakers. Therefore, be sure to connect passive speakers to these terminals.*

Connexions

Précautions

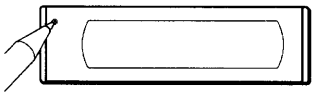
- Cet appareil est conçu pour fonctionner sur tension continue de 12 V avec masse négative.
- Veillez à ne coincer aucun fil entre la vis et la carrosserie ou cet appareil ou aucun élément mobile comme les glissières du siège, etc.
- Brancher les fils d'entrée d'alimentation **jaune** et **rouge** seulement après avoir terminé tous les autres branchements.
- Veiller à ne pas raccorder le fil rouge d'entrée d'alimentation à la borne positive de 12 V qui est alimentée quand la clé de contact est sur la position accessoires.
- **Rassembler tous les fils de terre en un point de masse commun.**
- Brancher le câble jaune à un circuit libre de la voiture dont la capacité nominale est supérieure à la capacité du fusible de l'appareil. Si vous branchez cet appareil en série avec d'autres composants stéréo, le circuit de la voiture auxquels ils sont raccordés doit afficher une capacité nominale supérieure à la somme des capacités individuelles de chaque composant. S'il n'y a pas de circuits de voiture affichant une capacité égale à la capacité du fusible de l'appareil, brancher l'appareil directement à la batterie. Si aucun circuit de voiture n'est disponible pour connecter cet appareil, brancher l'appareil à un circuit de voiture supérieur à la capacité du fusible de l'appareil de telle sorte que si l'appareil grille son fusible, aucun autre circuit ne soit coupé.
- En cas d'installation dans une voiture dont le contact ne comporte pas de position ACC (accessoires), brancher le fil d'entreé d'alimentation rouge à la borne + 12 V qui est alimenteé en permanence par le fil jaune.

Avertissement en cas d'installation dans une voiture dont le contact ne comporte pas de position ACC (accessoires)

N'oubliez pas d'appuyer sur le bouton (OFF) de l'appareil pendant deux secondes après avoir coupé le moteur de façon à désactiver l'affichage de l'horloge.
Si vous appuyez brièvement sur (OFF), l'affichage de l'horloge n'est pas désactivé, ce qui provoque une usure de la batterie.

Touche de réinitialisation

Quand l'installation et les connexions sont terminées, appuyer sur la touche de réinitialisation avec un stylo bille ou un objet pointu.



Remarques sur les câbles de commande et d'alimentation
- *Le fil de commande d'antenne (bleu) assure une alimentation de +12 V CC lorsque vous mettez le syntoniseur sous tension.*
- *Si votre voiture est équipée d'une antenne FM/AM intégrée dans la vitre arrière/latérale, il est nécessaire de raccorder le fil de commande de l'antenne électrique (bleu) ou le fil d'entrée d'alimentation des accessoires (rouge) de l'amplificateur d'antenne existant. Pour plus de détails, consultez votre revendeur.*
- *Une antenne électrique sans boîtier de relais ne peut être utilisée avec cet appareil.*

Connexion pour la conservation de la mémoire
Lorsque le fil d'entrée d'alimentation jaune est connecté, le circuit de la mémoire est alimenté en permanence même si la clé de contact est sur la position d'arrêt.

Remarques sur la connexion des haut-parleurs
- *Avant de raccorder les haut-parleurs, mettre l'appareil hors tension.*
- *Utiliser des haut-parleurs ayant une impédance de 4 à 8 ohms et une capacité adéquate sous peine de les endommager.*
- *Ne pas raccorder les bornes du système de haut-parleurs au châssis de la voiture et ne pas connecter les bornes du haut-parleur droit à celles du haut-parleur gauche.*
- *Ne pas tenter de raccorder les haut-parleurs en parallèle.*
- *Ne pas raccorder des haut-parleurs actifs (avec amplificateurs intégrés) aux bornes de haut-parleur de l'appareil sous peine de les endommager. Veiller à raccorder des haut-parleurs passifs à ces bornes.*

Conexiones

Precauciones

- Esta unidad ha sido diseñada para alimentarse con 12 V CC, negativo a masa, solamente.
- Tenga cuidado de no atrapar ningún cable entre algún tornillo y la carrocería del automóvil o esta unidad o entre las partes móviles, como por ejemplo los rañes del asiento, etc.
- Conecte los cables conectores de alimentación **amarillo** y **rojo** solamente después de haber conectado los demás.
- Cerciórese de conectar el cable conector de alimentación rojo a un terminal de 12 V positivo que se active al poner la llave de encendido en la posición para accesorios.
- **Conecte todos los conductores de puesta a masa a un punto común.**
- Conecte el cable amarillo a un circuito libre del automóvil que tenga una capacidad superior a la del fusible de la unidad. Si conecta esta unidad en serie con otros componentes estereofónicos, el circuito del automóvil al que se encuentran conectados debe tener una capacidad superior a la suma de las capacidades de los fusibles de cada componente. Si ningún cicuito del automóvil tiene una capacidad tan alta como la del fusible de la unidad, conecte ésta directamente a la batería. Si el automóvil no dispone de ningún circuito para conectar esta unidad, conéctela a un circuito del automóvil con capacidad superior a la del fusible de la unidad, de forma que si se funde el fusible de ésta, no se interrumpa ningún otro circuito.
- Si realiza la instalación en un automóvil que no disponga de posición ACC (auxiliar) en el interruptor de la llave de encendido, conecte el cable rojo de entrada de alimentación al terminal de alimentación de +12V que recibe energía permanentemente; para ello, utilice el cable amarillo.

Advertencia sobre la instalación en un automóvil que no disponga de posición ACC (accesorios) en el interruptor de la llave de encendido

Asegúrese de presionar (OFF) en la unidad durante dos segundos para desactivar la indicación del reloj una vez apagado el motor.
Si presiona (OFF) momentáneamente, la indicación del reloj no se desactivará y esto causará el desgaste de la batería.

Botón de restauración

Cuando finalice la instalación y las conexiones, cerciórese de presionar el botón de restauración con un bolígrafo, etc.

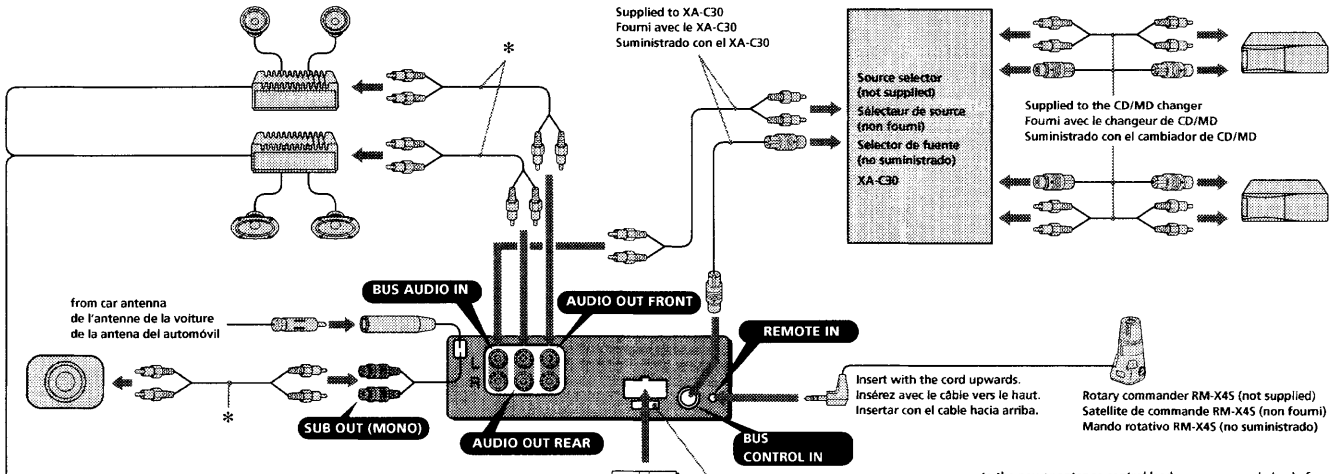
Notas sobre los cables de control y de fuente de alimentación
- *El conductor de control de la antena motorizada (azul) suministrará + 12 V CC cuando conecte la alimentación de la unidad.*
- *Si se ha instalado una antena de recepción de FM/AM en el cristal trasero lateral del automóvil, es necesario conectar el cable de control de la antena motorizada (azul) o el cable auxiliar de entrada de alimentación (rojo) al terminal de alimentación del amplificador de antena existente. Para obtener información detallada, consulte a su proveedor.*
- *Con esta unidad no podrá emplearse una antena motorizada desprovista de caja de relé.*

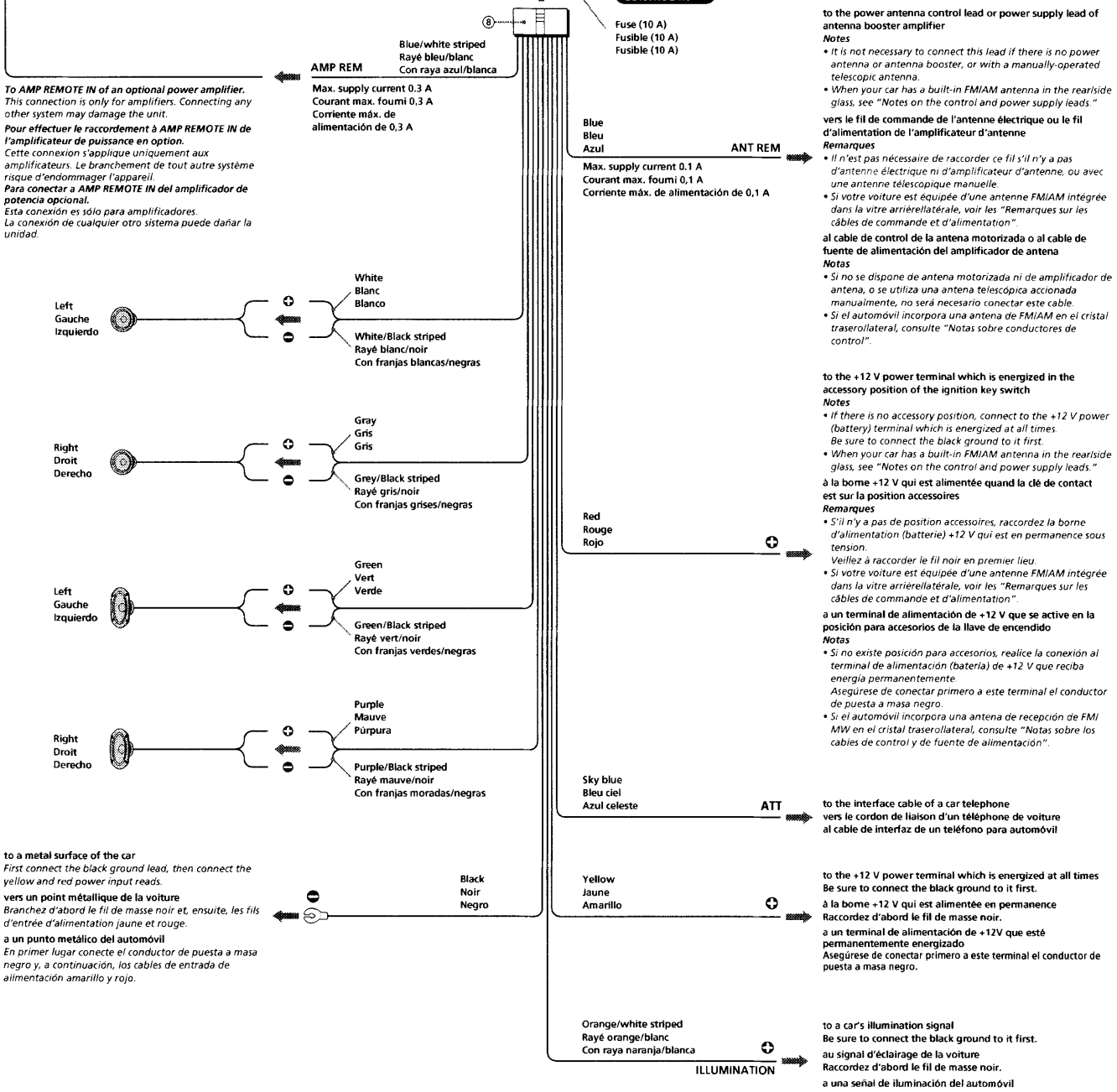
Conexión para protección de la memoria
Si conecta el cable de entrada de alimentación amarillo, el circuito de la memoria siempre recibirá alimentación, aunque ponga la llave de encendido en la posición de apagado.

Notas sobre la conexión de los altavoces
- *Antes de conectar los altavoces, desconecte la alimentación de la unidad.*
- *Utilice altavoces con una impedancia de 4 a 8 Ohmios, y con la potencia máxima admisible adecuada, ya que de lo contrario podría dañarlos.*
- *No conecte los terminales del sistema de altavoces al chasis del automóvil, ni los del altavoz izquierdo a los del derecho.*
- *No intente conectar los altavoces en paralelo.*
- *No conecte altavoces activos (con amplificadores incorporados) a los terminales de altavoces de la unidad. Si lo hiciese, podría dañar tales altavoces. Por lo tanto, cerciórese de conectar altavoces pasivos a estos terminales.*

Connection example
Exemple de connection
Ejemplo de conexiones

* RCA pin cord (not supplied)
Cordon à broche RCA (non fourni)
Cable con pines RCA (no suministrado)


Supplied to XA-C30
Fourni avec le XA-C30
Suministrado con el XA-C30
Source selector (not supplied)
Sélecteur de source (non fourni)
Selector de fuente (no suministrado)
XA-C30
Supplied to the CD/MD changer
Fourni avec le changeur de CD/MD
Suministrado con el cambiador de CD/MD
from car antenna
de l'antenne de la voiture
de la antena del automóvil
BUS AUDIO IN
AUDIO OUT FRONT
REMOTE IN
SUB OUT (MONO)
AUDIO OUT REAR
BUS CONTROL IN
Insert with the cord upwards.
Insérez avec le câble vers le haut.
Insertar con el cable hacia arriba.
Rotary commander RM-X4S (not supplied)
Satellite de commande RM-X4S (non fourni)
Mando rotativo RM-X4S (no suministrado)



To AMP REMOTE IN of an optional power amplifier.
This connection is only for amplifiers. Connecting any other system may damage the unit.

Pour effectuer le raccordement à AMP REMOTE IN de l'amplificateur de puissance en option.
Cette connexion s'applique uniquement aux amplificateurs. Le branchement de tout autre système risque d'endommager l'appareil.

Para conectar a AMP REMOTE IN del amplificador de potencia opcional.
Esta conexión es sólo para amplificadores. La conexión de cualquier otro sistema puede dañar la unidad.

to the power antenna control lead or power supply lead of antenna booster amplifier
Notes
- *It is not necessary to connect this lead if there is no power antenna or antenna booster, or with a manually-operated telescopic antenna.*
- *When your car has a built-in FM/AM antenna in the rear/side glass, see "Notes on the control and power supply leads."*

vers le fil de commande de l'antenne électrique ou le fil d'alimentation de l'amplificateur d'antenne
Remarques
- *Il n'est pas nécessaire de raccorder ce fil s'il n'y a pas d'antenne électrique ni d'amplificateur d'antenne, ou avec une antenne télescopique manuelle.*
- *Si votre voiture est équipée d'une antenne FM/AM intégrée dans la vitre arrière/latérale, voir les "Remarques sur les câbles de commande et d'alimentation".*

al cable de control de la antena motorizada o al cable de fuente de alimentación del amplificador de antena
Notas
- *Si no se dispone de antena motorizada ni de amplificador de antena, o se utiliza una antena telescópica accionada manualmente, no será necesario conectar este cable.*
- *Si el automóvil incorpora una antena de FM/AM en el cristal trasero/lateral, consulte "Notas sobre conductores de control".*

to the +12 V power terminal which is energized in the accessory position of the ignition key switch
Notes
- *If there is no accessory position, connect to the +12 V power (battery) terminal which is energized at all times. Be sure to connect the black ground to it first.*
- *When your car has a built-in FM/AM antenna in the rear/side glass, see "Notes on the control and power supply leads."*

à la borne +12 V qui est alimentée quand la clé de contact est sur la position accessoires
Remarques
- *S'il n'y a pas de position accessoires, raccordez la borne d'alimentation (batterie) +12 V qui est en permanence sous tension. Veillez à raccorder le fil noir en premier lieu.*
- *Si votre voiture est équipée d'une antenne FM/AM intégrée dans la vitre arrière/latérale, voir les "Remarques sur les câbles de commande et d'alimentation".*

a un terminal de alimentación de +12 V que se activa en la posición para accesorios de la llave de encendido
Notas
- *Si no existe posición para accesorios, realice la conexión al terminal de alimentación (batería) de +12 V que reciba energía permanentemente. Asegúrese de conectar primero a este terminal el conductor de puesta a masa negro.*
- *Si el automóvil incorpora una antena de recepción de FM/MW en el cristal trasero/lateral, consulte "Notas sobre los cables de control y de fuente de alimentación".*

to the interface cable of a car telephone
vers le cordon de liaison d'un téléphone de voiture
al cable de interfaz de un teléfono para automóvil

to the +12 V power terminal which is energized at all times
Be sure to connect the black ground to it first.
à la borne +12 V qui est alimentée en permanence
Raccordez d'abord le fil de masse noir.
a un terminal de alimentación de +12V que esté permanentemente energizado
Asegúrese de conectar primero a este terminal el conductor de puesta a masa negro.

to a car's illumination signal
Be sure to connect the black ground to it first.
au signal d'éclairage de la voiture
Raccordez d'abord le fil de masse noir.
a una señal de iluminación del automóvil
Asegúrese de conectar primero a este terminal el conductor de puesta a masa negro.

to a metal surface of the car
First connect the black ground lead, then connect the yellow and red power input leads.
vers un point métallique de la voiture
Branchez d'abord le fil de masse noir et, ensuite, les fils d'entrée d'alimentation jaune et rouge.
a un punto metálico del automóvil
En primer lugar conecte el conductor de puesta a masa negro y, a continuación, los cables de entrada de alimentación amarillo y rojo.

Connection diagram
Schéma de connexion
Diagrama de conexiones

Equipment used in illustrations (not supllied)
Appareils utilisés dans les illustrations (non fournis)
Equipo utilizado en las ilustraciones (no suministrado)

Front speaker
Haut-parleur avant
Altavoces delanteros

Rear speaker
Haut-parleur arrière
Altavoces traseros

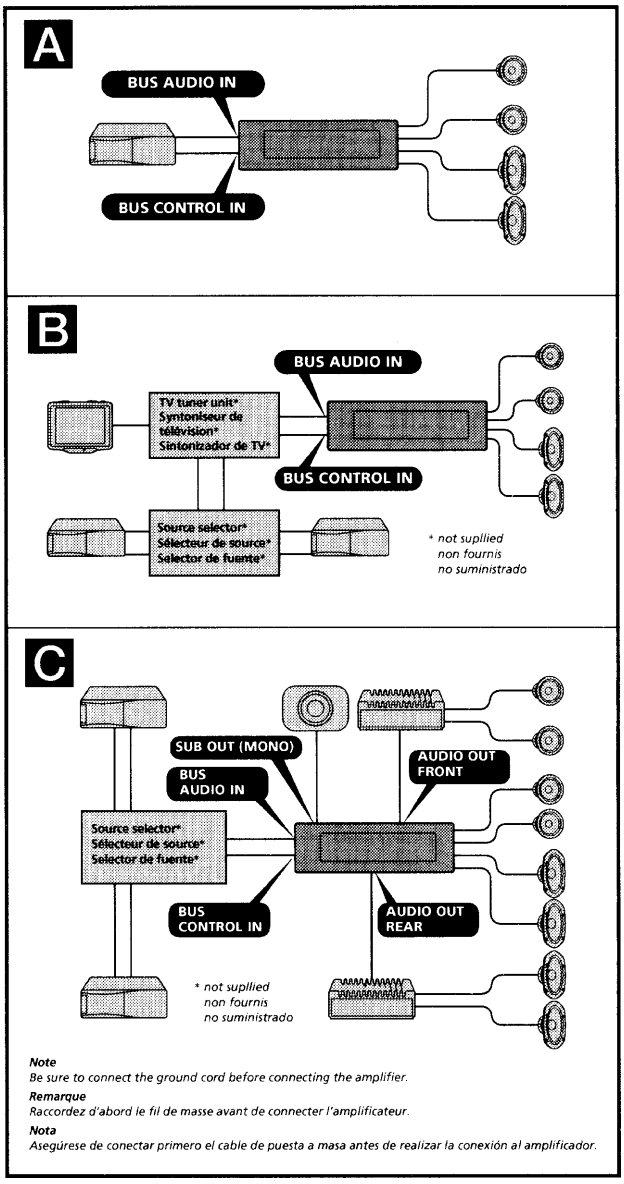
Power amplifier
Amplificateur de puissance
Amplificador de potencia

CD/MD changer
Changeur de CD/MD
Cambiador de CD/MD

TV monitor
Moniteur du télévisseur
Monitor de TV

Active subwoofer
Subwoofer actif
Altavoz potenciador de graves activo

For connecting two or more changers, the source selector XA-C30 (optional) is necessary.
Dans le cas du raccordement de deux changeurs ou plus, le sélecteur de source XA-C30 (option) est indispensable.
Si desea conectar dos o más cambiadores, necesitará el selector de fuente XA-C30 (opcional).



Note
Be sure to connect the ground cord before connecting the amplifier.

Remarque
Raccordez d'abord le fil de masse avant de connecter l'amplificateur.

Nota
Asegúrese de conectar primero el cable de puesta a masa antes de realizar la conexión al amplificador.

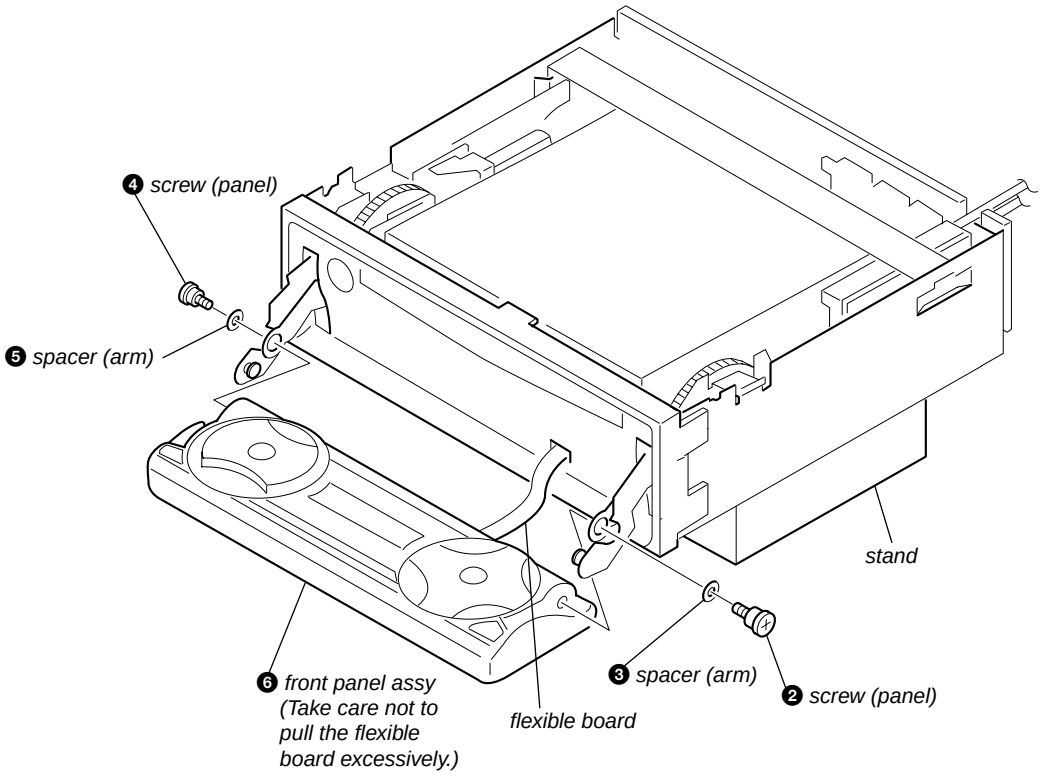
SECTION 2
DISASSEMBLY

Note : This set can be disassemble according to the following sequence.

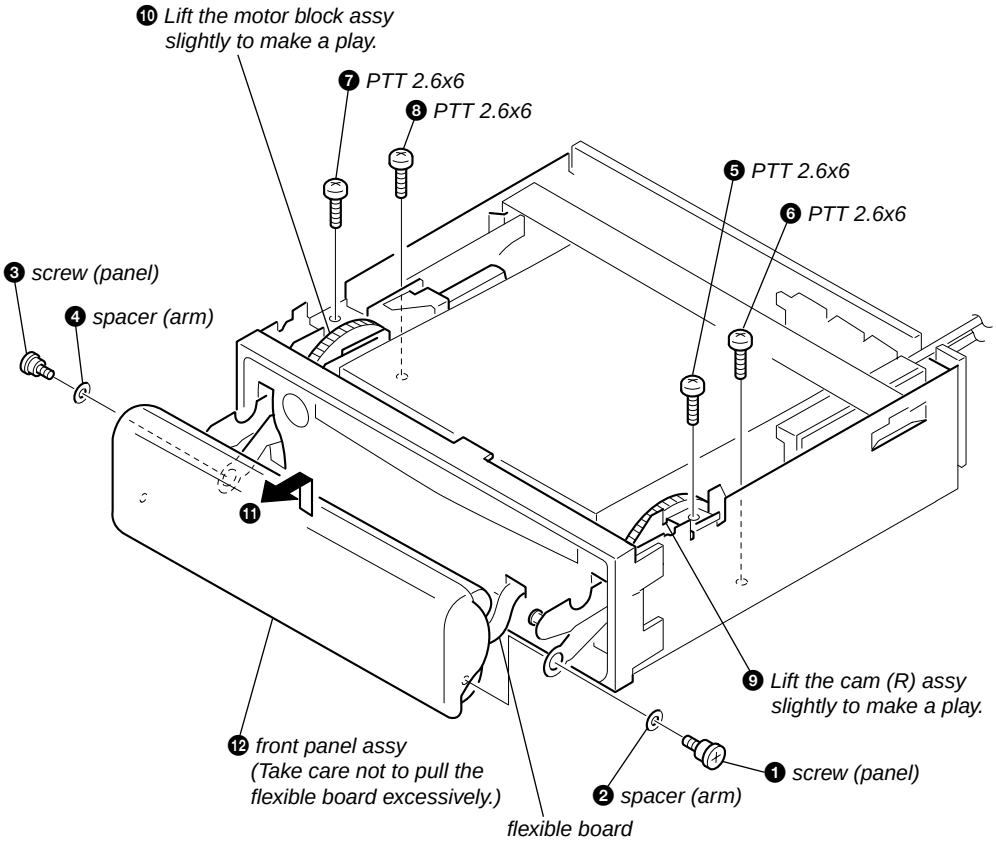
Front Panel Assy (Normal) → CD Mechanism Block, Front Panel Assy
Front Panel Assy (Inoperative) →
→ Sub Panel (CD) Sub Assy → Motor Block Assy, Cam (R) Assy → Main Board → Heat Sink
→ Chassis (T) Sub Assy → Lever Section
→ Servo Board → Shaft Roller Assy → Floating Block Assy
→ Optical Pick-up Block

Note : Follow the disassembly procedure in the numerical order given.

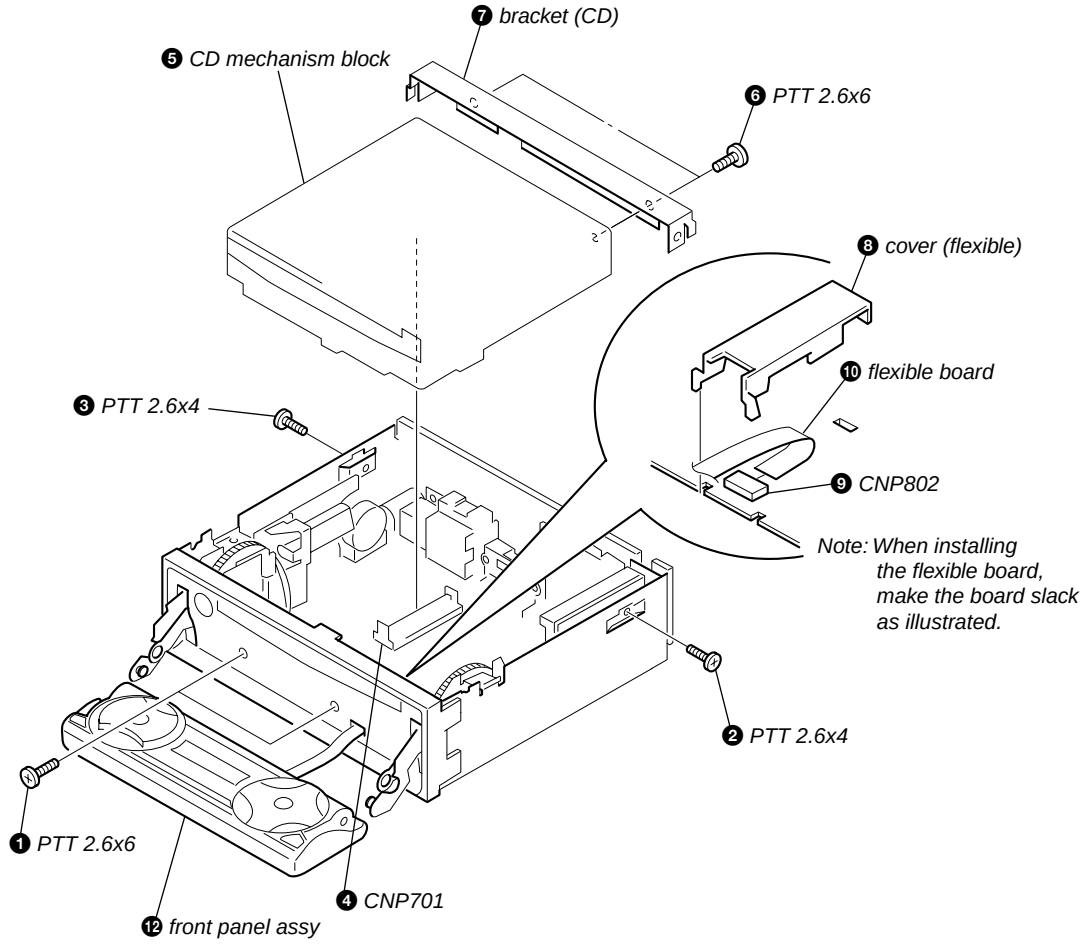
2-1. FRONT PANEL ASSY (NORMAL)



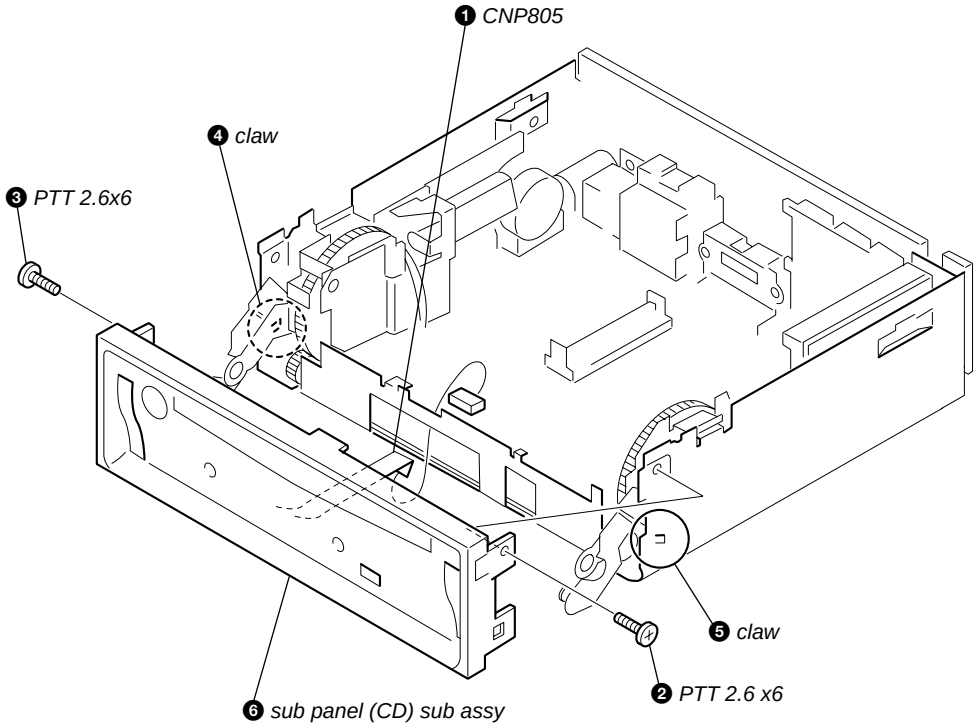
2-2. FRONT PANEL ASSY (INOPERATIVE)


⑩ Lift the motor block assy slightly to make a play.
⑦ PTT 2.6x6
⑧ PTT 2.6x6
⑤ PTT 2.6x6
⑥ PTT 2.6x6
③ screw (panel)
④ spacer (arm)
⑪
⑨ Lift the cam (R) assy slightly to make a play.
⑫ front panel assy (Take care not to pull the flexible board excessively.)
① screw (panel)
② spacer (arm)
flexible board

2-3. CD MECHANISM BLOCK, FRONT PANEL ASSY

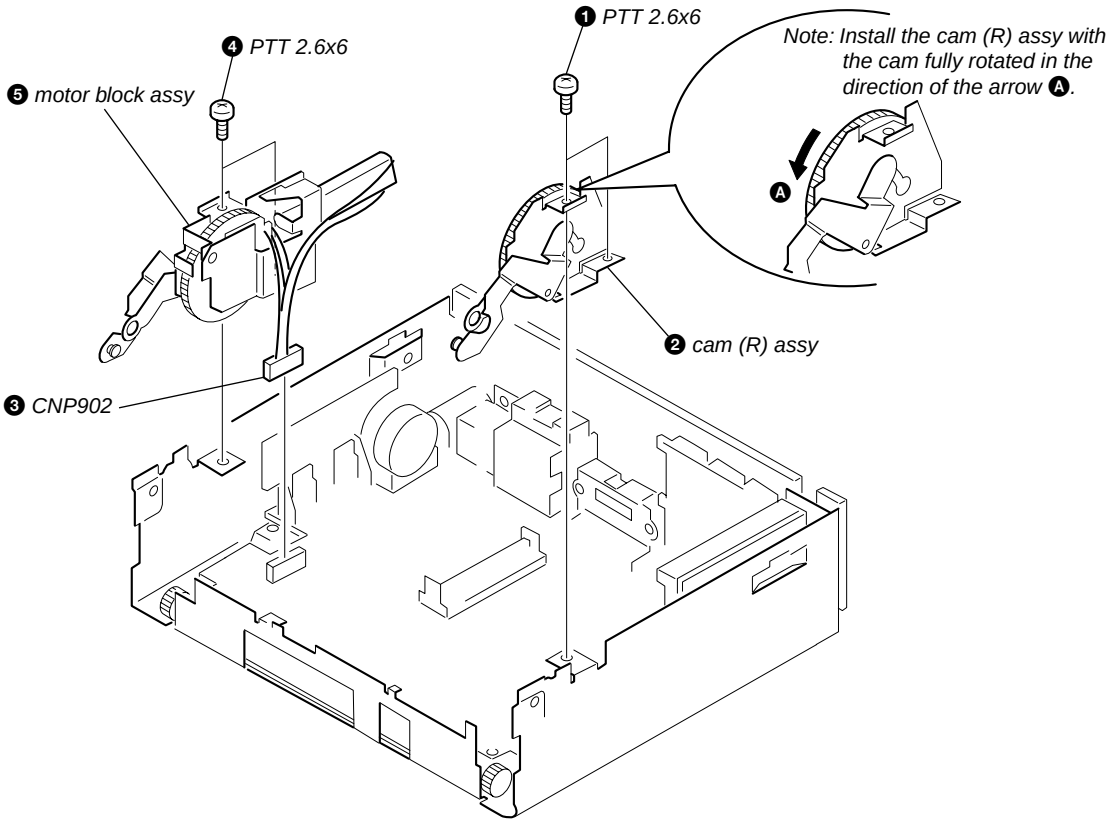


2-4. SUB PANEL (CD) SUB ASSY

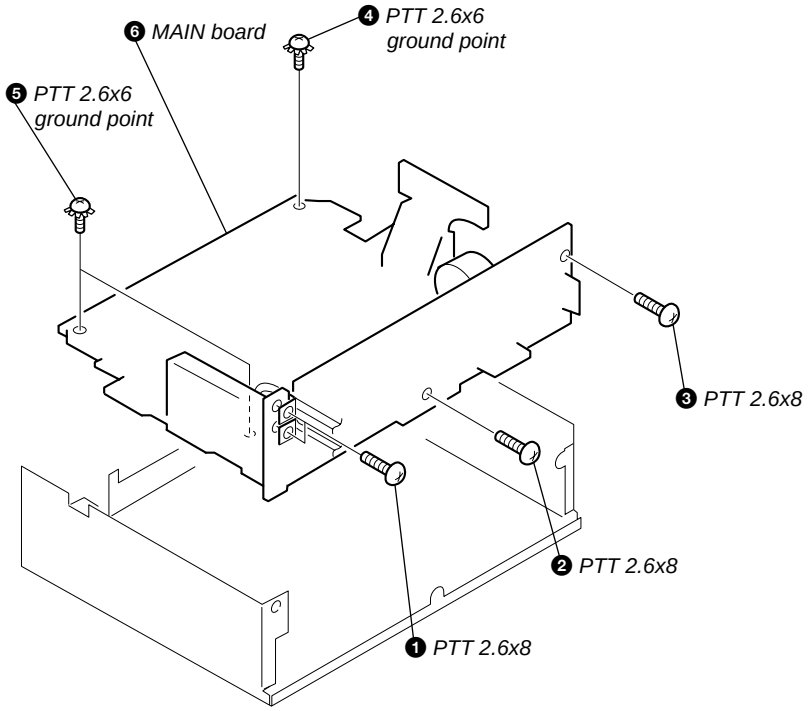


2-5. MOTOR BLOCK ASSY, CAM (R) ASSY

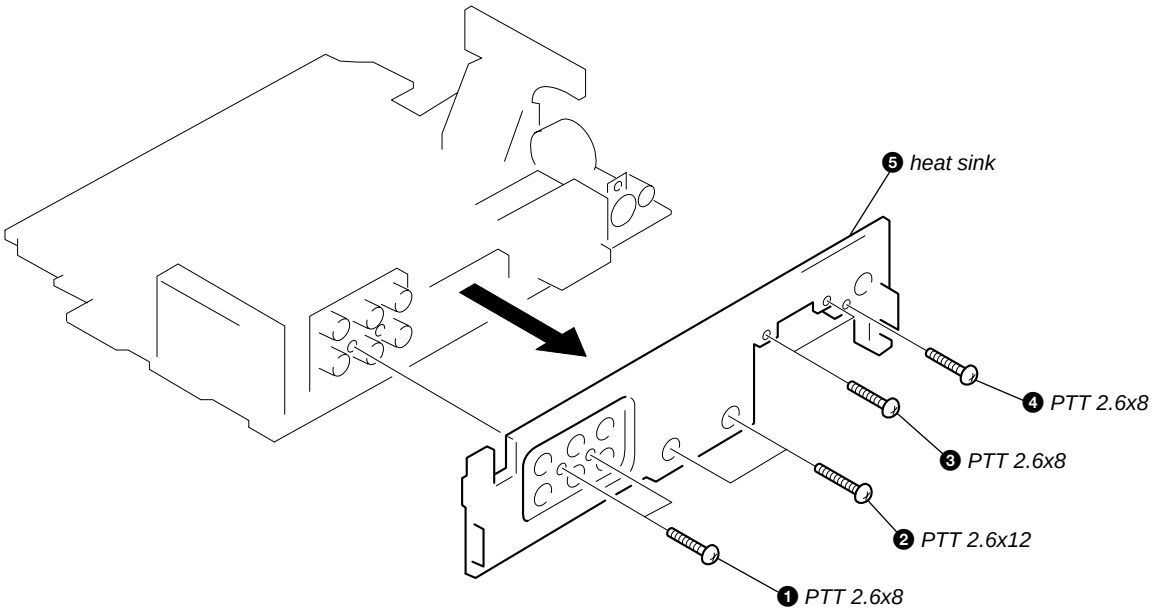
Note : Install the motor block assy and cam (R) assy in this roder.
For phase alignment between cams (L) and (R), see page 20 and 22.


❶ PTT 2.6x6
❹ PTT 2.6x6
❺ motor block assy
Note: Install the cam (R) assy with the cam fully rotated in the direction of the arrow Ⓐ.
Ⓐ
❷ cam (R) assy
❸ CNP902

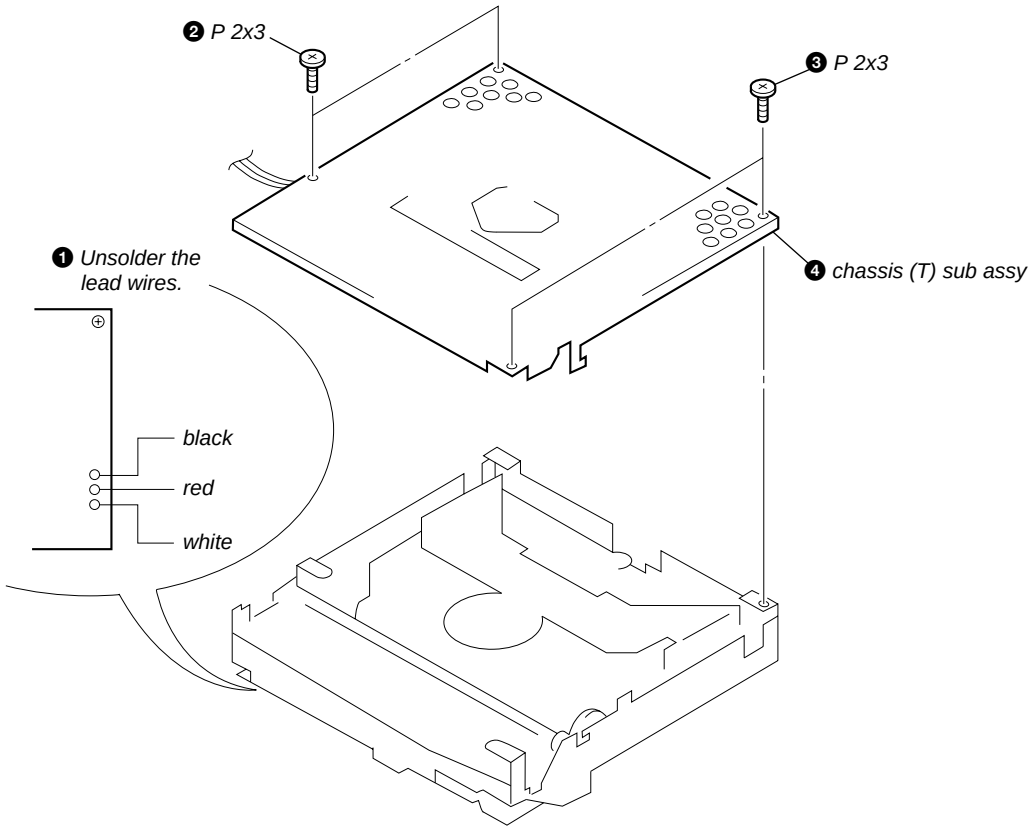
2-6. MAIN BOARD



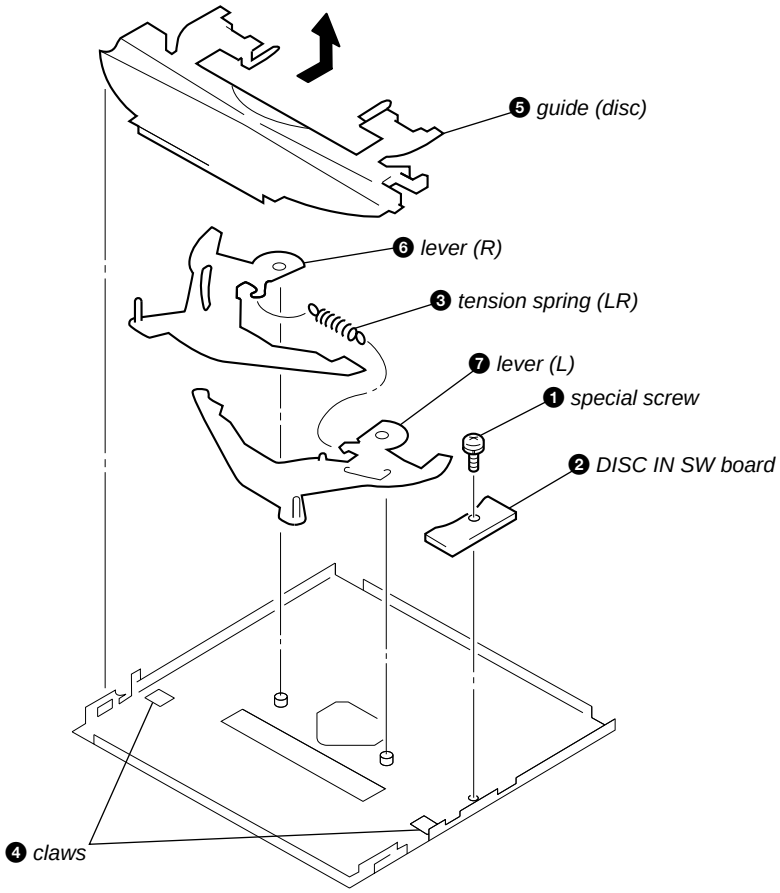
2-7. HEAT SINK



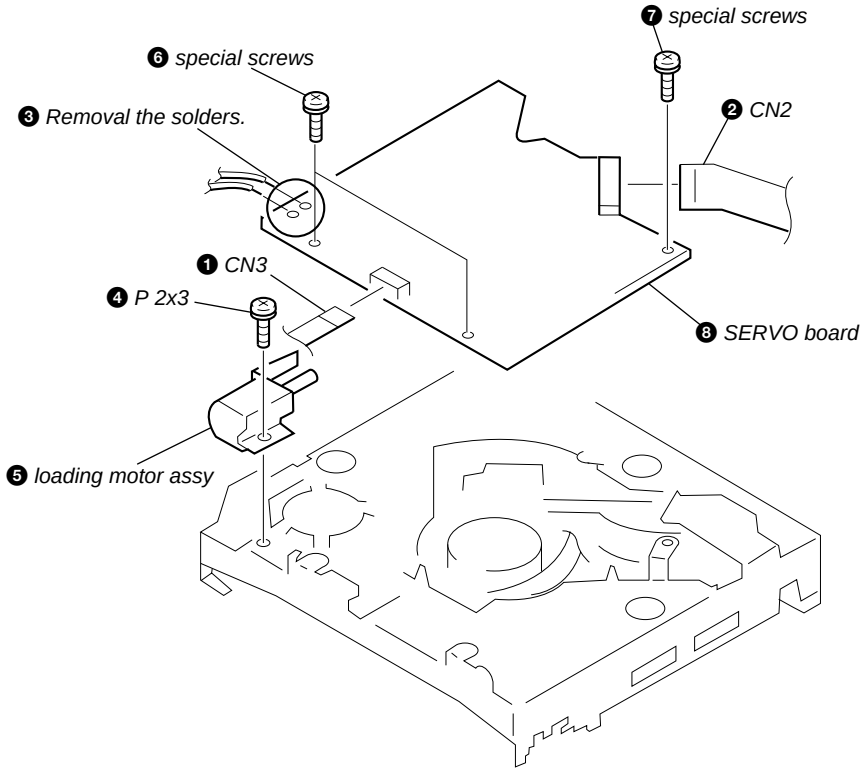
2-8. CHASSIS (T) SUB ASSY



2-9. LEVER SECTION



2-10. SERVO BOARD



2-11. SHAFT ROLLER ASSY

• When installing, take note of the positions arm (roller) and washers. (Fig. 1)

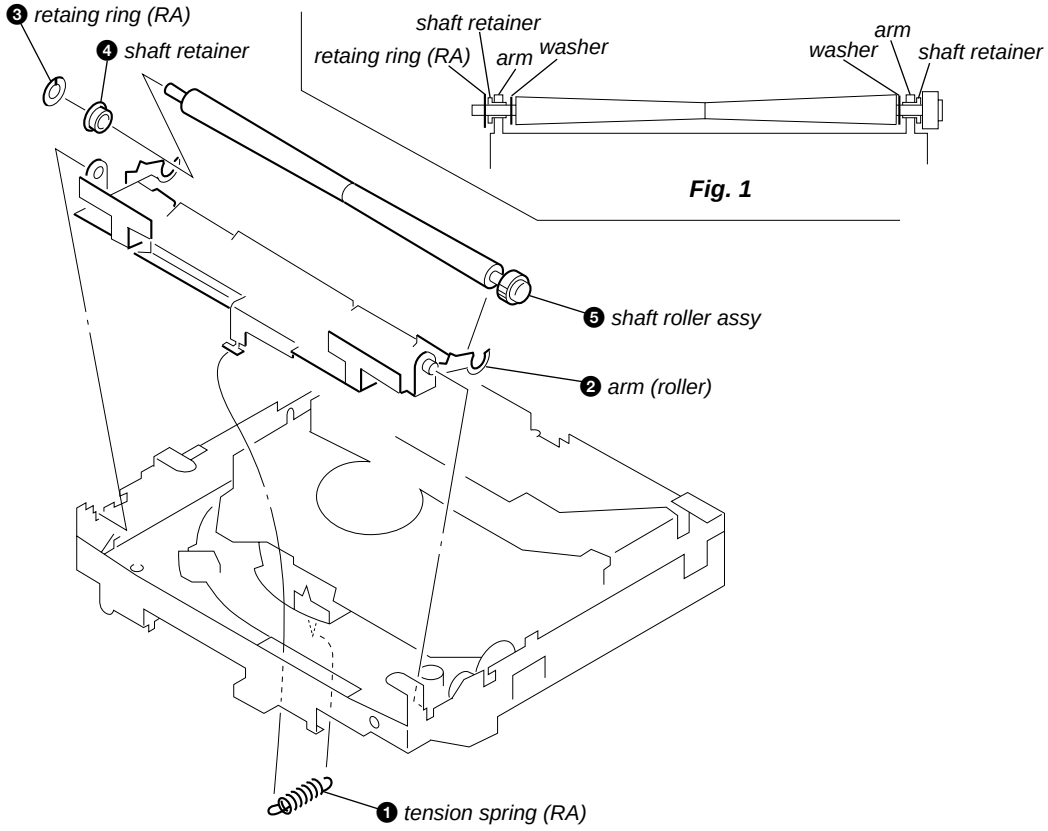
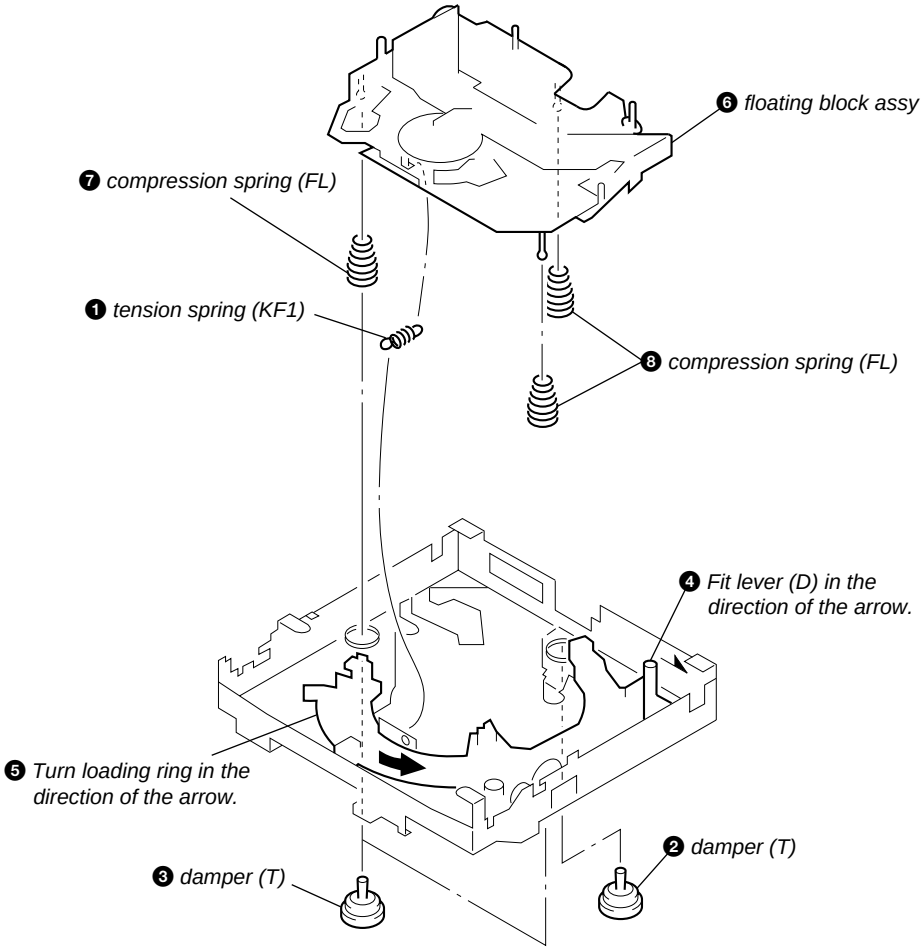
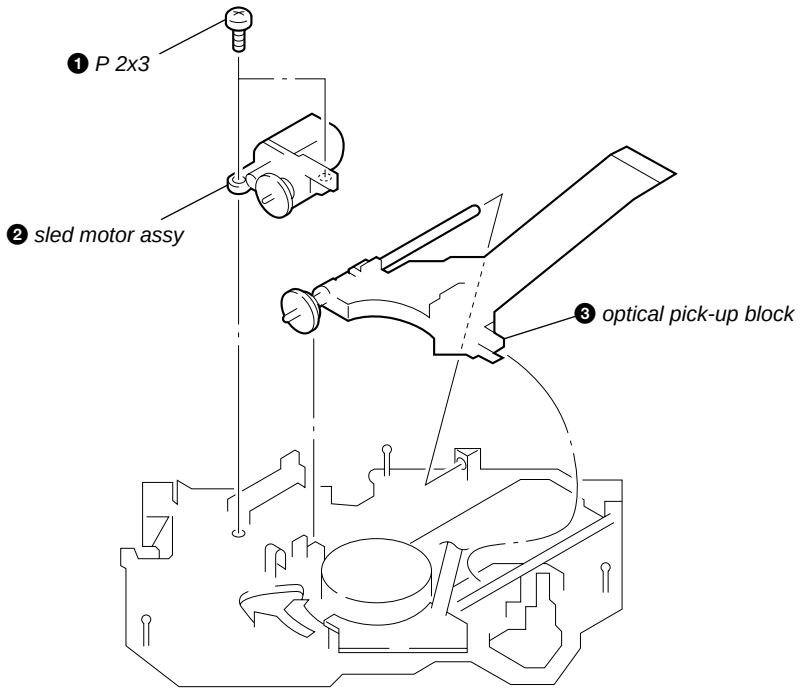


Fig. 1

2-12. FLOATING BLOCK ASSY

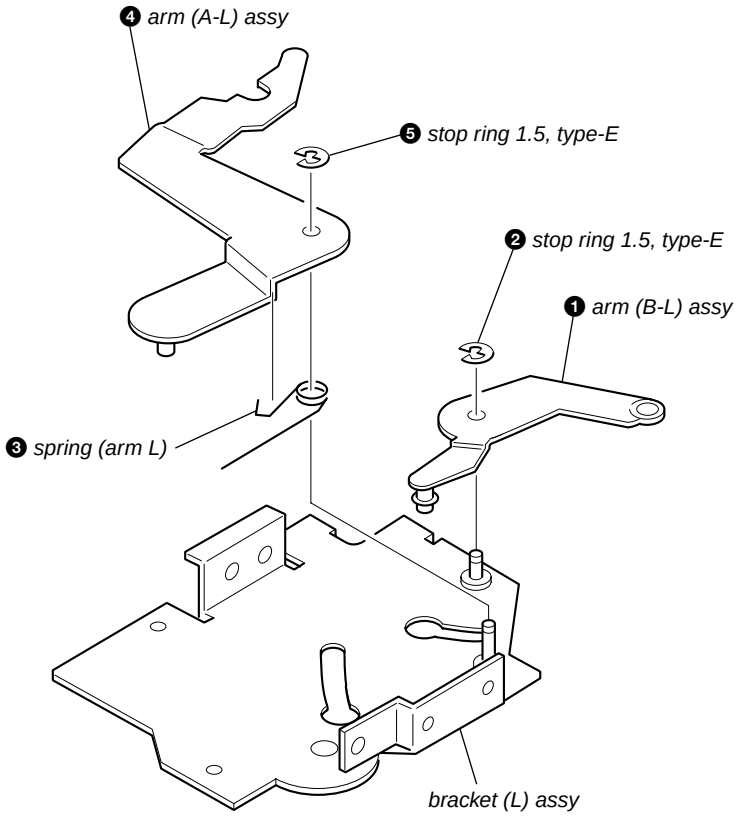

❻ floating block assy
❼ compression spring (FL)
❶ tension spring (KF1)
❽ compression spring (FL)
❹ Fit lever (D) in the direction of the arrow.
❺ Turn loading ring in the direction of the arrow.
❷ damper (T)
❸ damper (T)

2-13. OPTICAL PICK-UP BLOCK



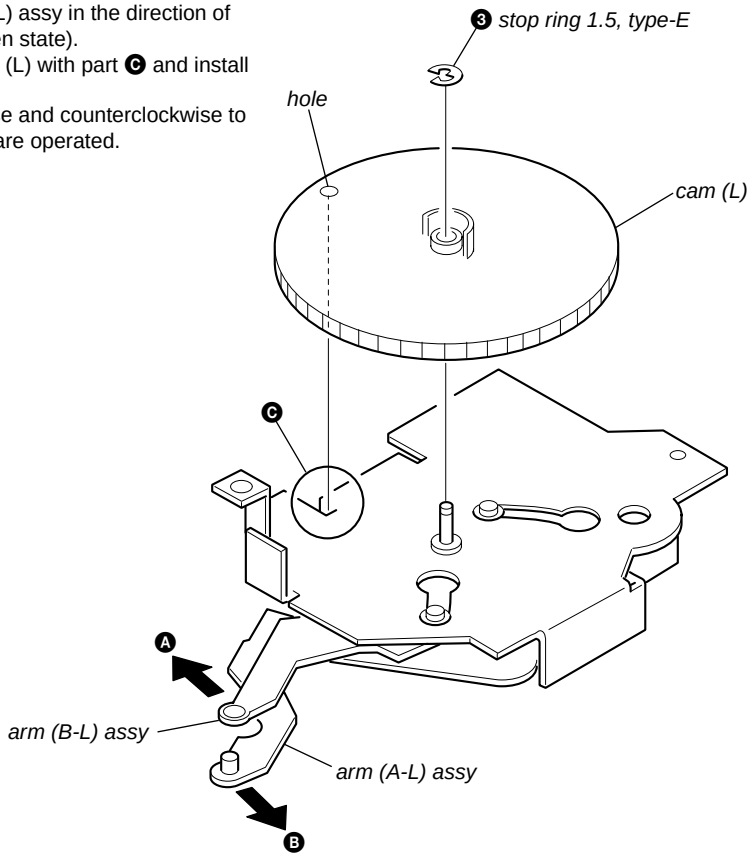
SECTION 3
PHASE ALIGNMENT

3-1. ARM (A-L) ASSY, ARM (B-L) ASSY



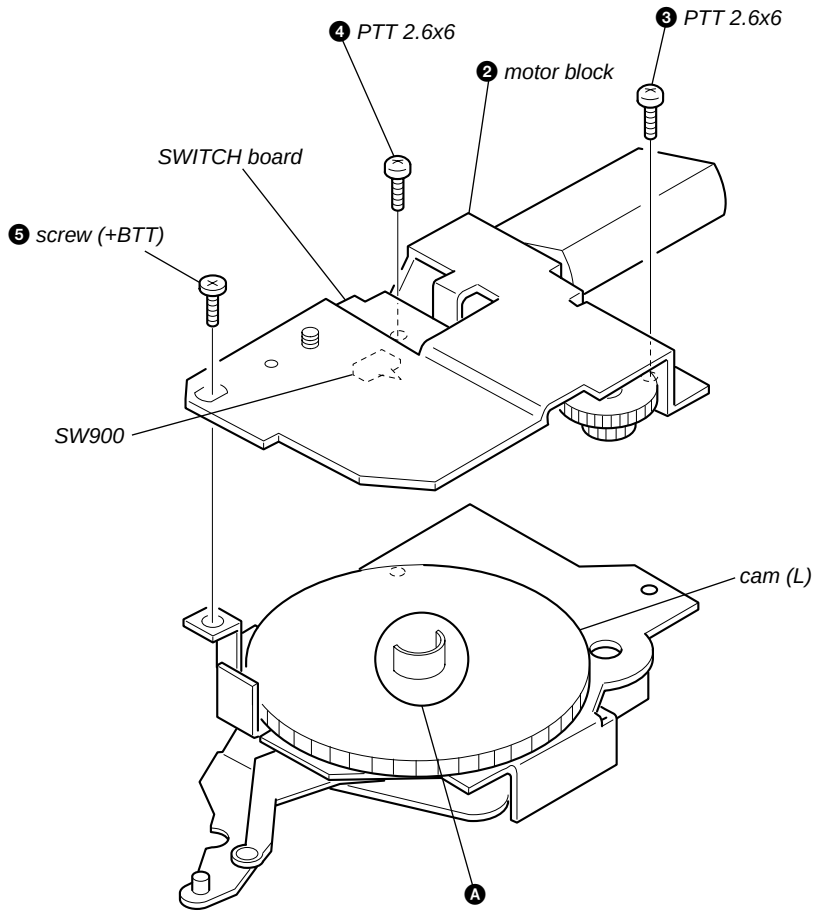
3-2. CAM (L)

❶ Move the arm (B-L) assy in the direction of the arrow Ⓐ and the arm (A-L) assy in the direction of the arrow Ⓑ fully (full open state).
❷ Align the hole on the cam (L) with part Ⓒ and install the cam.
❹ Turn the cam (L) clockwise and counterclockwise to verify that both the arms are operated.



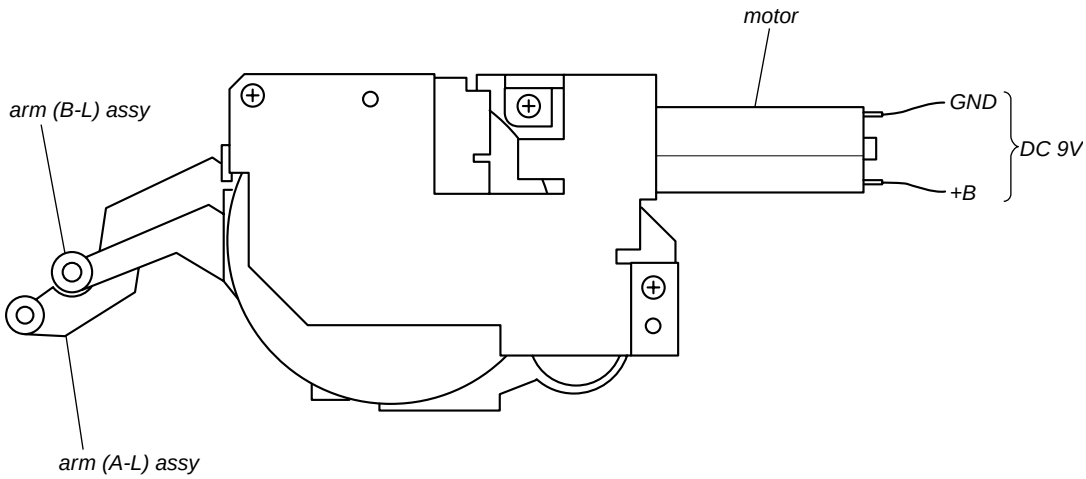
3-3. MOTOR BLOCK

❶ Turn the cam (L) and position the cam so that part Ⓐ does not touch the SWITCH board SW900.

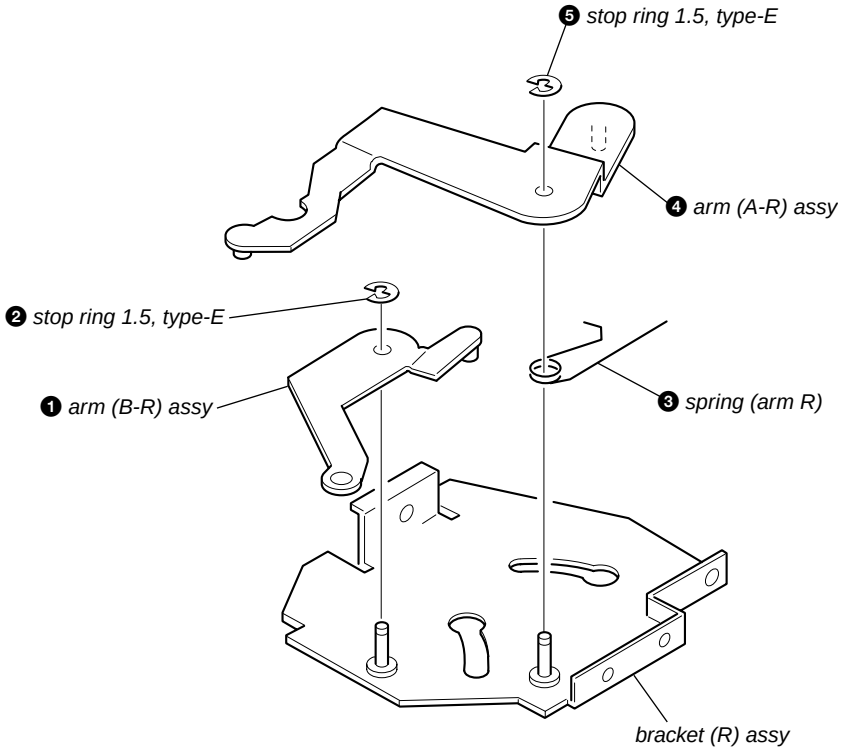


3-4. ALIGNMENT BETWEEN ARM (A-L) ASSY AND ARM (B-L) ASSY

❶ Input 9V DC to the motor terminal until the cam (L) stops rotating.
Take care to avoid overload of the motor.
❷ Verify that the arm (A-L) assy and arm (B-L) assy are positioned as shown below (full open).

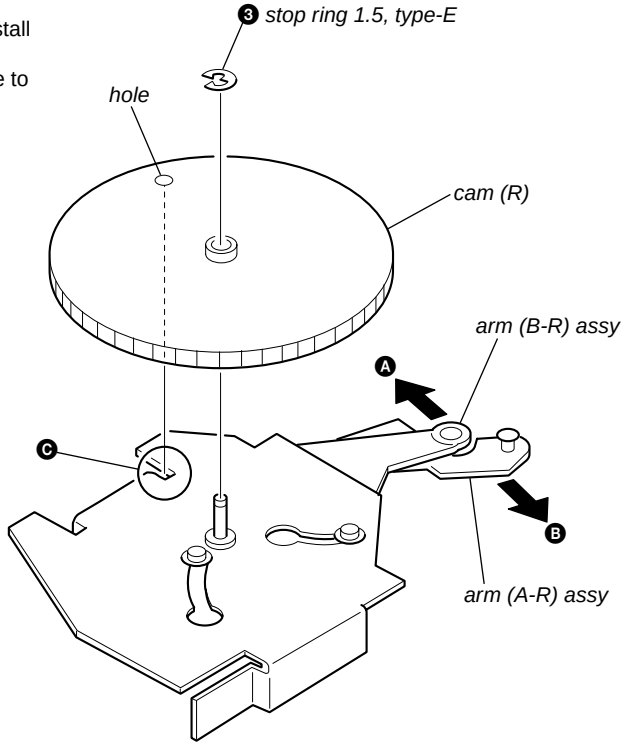


3-5. ARM (A-R) ASSY, ARM (B-R) ASSY



3-6. CAM (R)

❶ Move the arm (B-R) assy in the direction of the arrow Ⓐ and the arm (A-R) assy in the direction of the arrow Ⓑ fully (full open state).
❷ Align the hole on the cam (R) with part Ⓒ and install the cam.
❹ Turn the cam (R) clockwise and counterclockwise to verify that both the arms are operated.



SECTION 4
DIAGRAMS

4-1. IC PIN DESCRIPTIONS

• IC501 CXD2598Q (DIGITAL SERVO, DIGITAL SIGNAL PROCESSOR) (SERVO BOARD)

Pin No.	Pin Name	I/O	Pin Description
1	DVDD	—	Digital power supply pin
2	DVSS	—	Digital ground
3	SOUT	O	Servo brock serial data output (Not used.)
4	SOCK	O	Servo brock serial data read clock output (Not used.)
5	XOLT	O	Servo brock serial data latch output (Not used.)
6	SQSO	O	Sub Q 80 bit, PCM peak and level data output. CD TEXT data output
7	SQCK	I	Clock input from SQSO read output.
8	SCSY	I	Fixed at “L”.
9	SBSO	O	Serial output of sub-P to W. (Not used.)
10	EXCK	I	Clock input from SBSO read output. (Fixed at “L”)
11	XRST	I	System reset (“L”: Reset)
12	STSM	I	System mute input (Fixed at “L”)
13	DATA	I	Serial data input from CPU.
14	XLAT	I	Latch input from CPU. Latch serial data at the falling edge.
15	CLOK	I	Serial data transfer clock input from CPU.
16	SENS	O	SENS output for CPU.
17	SCLK	I	Clock input from SENS serial data read.
18	ATSK	I/O	Input/output for anti-shock.
19	WFCK	O	WFCK (Write Flame Clock) output (Not used.)
20	XUGF	O	XUGF output (Not used.)
21	XPCK	O	XPCK output (Not used.)
22	GFS	O	GFS output
23	C2PO	O	C2PO output (Not used.)
24	SCOR	O	“H” output at either detection, sub code sync S0 or S1.
25	C4M	O	4.2336 MHz output (Not used.)
26	WDCK	O	Word clock input f=2Fs (Not used.)
27	COUT	I/O	Track number count signal input/output (Not used.)
28	MIRR	I/O	Mirror signal input/output (Not used.)
29	DVSS	—	Digital ground
30	DVDD	—	Digital power supply pin
31	DFCT	I/O	Diffect signal input/output (Not used.)
32	FOK	I/O	Focus OK signal output
33	PWM1	I	External control input of spindle motor.
34	LOCK	I/O	Lock signal input/output
35	MDP	O	Servo control output of spindle motor.
36	SSTP	I	Disc most inner track detection signal input
37	FSTIO	I/O	2/3 frequency division output of pins ⑧⑥ and ⑧⑦. (Not used.)
38	SFDR	O	Sled drive output
39	SRDR	O	Sled drive output
40	TFDR	O	Tracking drive output
41	TRDR	O	Tracking drive output
42	FFDR	O	Focus drive output
43	FRDR	O	Focus drive output
44	DVDD	—	Digital power supply pin
45	DVSS	—	Digital ground
46	TEST	I	Test pin (Fixed at “L”.)
47	TES1	I	Test pin (Fixed at “L”.)
48	XTSL	I	X’tal select input (“L”: 16.9344 MHz, “H”: 33.8688 MHz)
49	VC	I	Center voltage input
50	FE	I	Focus error signal input
51	SE	I	Sled error signal input

Pin No.	Pin Name	I/O	Pin Description
52	TE	I	Tracking error signal input
53	CE	I	Center servo analog input
54	RFDC	I	RF signal input
55	ADIO	O	Test pin (Not used.)
56	AVSSO	—	Analog ground
57	IGEN	I	Constant current input from OP amplifier.
58	AVDDO	—	Analog ground
59	ASYO	O	EFM full-swing output (“L”: VSS, “H”: VDD)
60	ASYI	I	Asymmetry comparate voltage input
61	RFAC	I	EFM signal input
62	AVSS3	—	Analog ground
63	CLTV	I	VCO control voltage input from master.
64	FILO	O	Filter output for master PLL. (slave=digital PLL)
65	FILI	I	Filter input from master PLL.
66	PCO	O	Charge pump output for master PLL.
67	AVDD3	—	Analog power supply pin
68	BIAS	I	Asymmetry circuit constant current input
69	VCTL	I	VCO2 control input from wideband EFM PLL.
70	V16M	O	VCO2 oscillator output for wideband EFM PLL. (Not used.)
71	VPCO	O	Charge pump output for wideband EFM PLL. (Not used.)
72	DVSS	—	Digital ground
73	MD2	I	Digital out ON/OFF control input (“L”: OFF, “H”: ON)
74	DOUT	O	Digital out output
75	ASYE	I	Asymmetry circuit ON/OFF input (“L”: OFF, “H”: ON)
76	DVDD	—	Digital power supply pin
77	LRCK	O	D/A interface LR clock output (f=Fs)
78	LRCKI	I	D/A interface LR clock input
79	PCMD	O	D/A interface serial data output (2’s COMP, MSB fast)
80	PCMD	I	D/A interface serial data input (2’s COMP, MSB fast)
81	BCK	O	D/A interface bit clock output
82	BCKI	I	D/A interface bit clock input
83	EMPH	O	Emphasis ON/OFF signal output
84	EMPHI	I	Emphasis ON/OFF signal input (“H”: ON, “L”: OFF)
85	XVDD	—	Power supply for master clock.
86	XTAI	I	X’tal oscillator input from master clock (16.9344 MHz).
87	XTAO	O	X’tal oscillator output for master clock (16.9344 MHz).
88	XVSS	—	Ground pin for master clock.
89	AVDD1	—	Analog power supply pin
90	AOUT1	O	Lch analog output
91	AIN1	I	Lch OP amplifier input
92	LOUT1	O	Lch LINE output
93	AVSS1	—	Analog ground
94	AVSS2	—	Analog ground
95	LOUT2	O	Rch LINE output
96	AIN2	I	Rch OP amplifier input
97	AOUT2	O	Rch analog output
98	AVDD2	—	Analog power supply pin
99	RMUT	O	Rch “0” detect Flug (Not used.)
100	LMUT	O	Lch “0” detect Flug (Not used.)

• IC5 CXP84640-072Q (CD SYSTEM CONTROL) (SERVO BOARD)

Pin No.	Pin Name	I/O	Pin Description
1	ITRPT	—	Not used in this set.
2, 3	—	—	Not used in this set.
4, 5	NCO	—	Not used in this set.
6	OPEN	I	Front panel open detection input
7	CLOSE	O	Front panel close control output
8	LINKOFF	I	Bus interface link input
9	NCO	—	Not used in this set.
10	$\overline{\text{D SW}}$	I	Down switch input (SW1)
11	SSTP	I	Limit switch input (SW4)
12, 13	NCO	—	Not used in this set.
14, 15	—	—	Not used in this set.
16	EMPH O	O	De-emphasis ON/OFF control output
17	CDMON	O	CD mechanism deck power control output
18	CD ON	O	CD power control output
19	A MUT	O	System attenuate control output
20	$\overline{\text{LD ON}}$	O	Laser power ON/OFF control output
21	$\overline{\text{CD RST}}$	O	CD system reset output
22	HOLD	O	Hold switch output
23	AGC CONT	O	AGC control output
24	—	—	Not used in this set.
25	PH3	I	Not used in this set.
26	$\overline{\text{TSTIN0}}$	I	Not used in this set.
27	$\overline{\text{TSTIN1}}$	I	Not used in this set.
28	$\overline{\text{TST.CLV}}$	I	Not used in this set.
29	NCO	—	Not used in this set.
30	$\overline{\text{RESET}}$	I	System reset input (“L”=Reset)
31	X IN	I	X’tal oscillator input from system clock. (10 MHz)
32	$\overline{\text{X OUT}}$	O	X’tal oscillator output for system clock. (10 MHz)
33	GND	—	Analog ground
34	$\overline{\text{XT OUT}}$	O	Not used in this set.
35	XT IN	I	Not used in this set.
36	AVSS	—	A/D converter ground
37	AVREF	I	A/D converter reference voltage input
38	TEP L	I	Not used in this set.
39	TEP H	I	Not used in this set.
40	SLED–	I	Sled drive input
41	PH2	I	Not used in this set.
42	SEK/SMET	I	Fixed at “H” in this set.
43	GFS/MNT2 SEL	I	Fixed at “H” in this set.
44	SC-JIG ON/OFF	I	Fixed at “H” in this set.
45	SCLK	O	CD-TEXT data read clock output
46	LOCK	I/O	Lock signal input/output
47	—	—	Not used in this set.
48	SCK2	O	Sub Q read clock output
49	SI2	I	Sub Q 80 bit, PCM peak and level data 16 bit input.
50	—	—	Not used in this set.
51	BUS CLK	I/O	Bus system serial clock input/output
52	BUS SI	I	Bus system serial interface input
53	BUS SO	O	Bus system serial interface output
54	F OK	I	Focus OK signal input
55	GFS	I	GFS signal detection input
56	TEST MODE	I	Fixed at “H” in this set.

Pin No.	Pin Name	I/O	Pin Description
57	SENS	I	SENS signal input
58	—	—	Not used in this set.
59	—	—	Not used in this set.
60	BU.IN	I	Back-up power detection input
61	$\overline{\text{BUSON}}$	I	Bus on control input
62	$\overline{\text{IN SW}}$	I	Disc in switch input (SW3)
63	$\overline{\text{SELF SW}}$	I	Self switch input (SW2)
64	SCOR	O	Sub-code sync output
65	CD-CKO	O	CD signal process serial clock input
66	LM LOD	O	Loading motor control output
67	CD DATA	O	CD signal process serial data output
68	CD-XLAT	O	CD signal process serial data latch output
69	LM-EJ	O	Loading motor control output
70	DRV-OE	O	Focus/tracking coil/sled motor control output
71	MD2	O	Digital out ON/OFF control output (“L”: OFF, “H”: ON)
72	VDD	—	Power supply pin
73	NIH	I	Fixed at “H” in this set.
74	V/Z	I	Fixed at “H” in this set.
75	PH1	I	Not used in this set.
76	—	—	Not used in this set.
77	DOUT-SEL	I	Fixed at “H” in this set.
78 – 80	—	—	Not used in this set.

• IC301 HD6432355A26F (DISPLAY CONTROL)

Pin No.	Pin Name	I/O	Pin Description
1, 2	PG3, 4	O	Not used. (Open)
3	VSS	—	Ground
4	NC	—	Not used. (Open)
5	VCC	—	Power supply pin (+5 V)
6 – 9	PC0 – 3	O	Not used. (Open)
10	VSS	—	Ground
11 – 14	PC4 – 7	O	Not used. (Open)
15 – 18	PB0 – 3	O	Not used. (Open)
19	VSS	—	Ground
20 – 23	PB4 – 7	O	Not used. (Open)
24 – 27	PA0 – 3	O	Not used. (Open)
28	VSS	—	Ground
29 – 32	PA4 – 7	O	Not used. (Open)
33	SP-LAT	I	Spectrum analyzer data latch input
34	P66	O	Not used. (Open)
35, 36	VSS	—	Ground
37	P65	O	Not used. (Open)
38	BUS-ON	I	BUS ON control input
39	VCC	—	Power supply pin (+5 V)
40 – 43	SPE-A, B, C, D	O	IC407 (BA3834F) control output
44	VSS	—	Ground
45	DSP SEL	I	Digital signal processor select input (Fixed at “H” in this set.)
46, 47	LED SW1, 2	I	Operation/display side illumination select control input1, 2
48	PE7	O	Not used. (Open)
49	BU-IN	I	Backup power detection input
50	LINK-OFF	O	LINK OFF output
51	PD2	O	Not used. (Open)
52	ILL-ON	O	Illumination power control output
53	VSS	—	Ground
54	PD4	O	Not used. (Open)
55	PD5	O	Not used. (Open)
56	PD6	O	Not used. (Open)
57	$\overline{\text{BOOT}}$	I	Display micon write control input
58	VCC	—	Power supply pin (+5 V)
59	P30	—	Not used. (Open)
60	TX/LCD-SO	O	LCD driver serial data output/Flash micon write data output
61	SP-SI	I	Digital signal processor IC spectrum analyzer data input
62	RX	I	Flash micon write data input
63	SP-CLK	I	Digital signal processor IC spectrum analyzer clock input (Not used.)
64	LCD CLK	O	LCD driver serial clock output
65	VSS	—	Ground
66	LCD CE0	O	LCD driver chip enable output 0
67, 68	VSS	—	Ground
69	$\overline{\text{LCD-INH}}$	O	LCD driver inhibit control output
70	LCD-CE1	O	LCD driver chip enable output 1
71	P63	O	Not used. (Open)
72 – 78	P27 – 21	O	Not used. (Open)
79	FL-W	O	Flash write control output (Not used. (Open))
80	FWE (L)	I	Flash write enable input (Not used. (Open))
81	$\overline{\text{RES}}$	I	System reset input
82	NMI (H)	I	Non-maskable interruption input
83	$\overline{\text{ST/SY (H)}}$	I	Hardware standby input

Pin No.	Pin Name	I/O	Pin Description
84	VCC	—	Power supply pin (+5 V)
85	XTAL	I	X'tal oscillation input (18.43 MHz)
86	EXTAL	O	X'tal oscillation output (18.43 MHz)
87	VSS	—	Ground
88	PF7	O	Not used. (Open)
89	VCC	—	Power supply pin (+5 V)
90 – 96	PF6 – 0	O	Not used. (Open)
97	UNI-SO	O	SONY BUS serial data output
98	UNI-SI	I	SONY BUS serial data input
99, 100	VSS	—	Ground
101	UNI-SCK	I	SONY BUS serial clock input
102	P53	O	Not used. (Open)
103	AVCC	—	Analog power supply pin (+5 V)
104	VREF	—	VREF+ input of A/D converter. (+5 V)
105	SPE-IN	I	IC407 (BA3834F) peak hold detection input
106 – 112	P41 – 47	I	Not used. (Fixed at "L" in this set.)
113	AVSS	—	Analog ground
114	VSS	—	Ground
115 – 122	P17 – 10	O	Not used. (Open)
123 – 125	MD0 (H) – MD2 (H)	I	Operation mode setting pin (Fixed at "H" in this set.)
126 – 128	PG0 – 2	O	Not used. (Open)

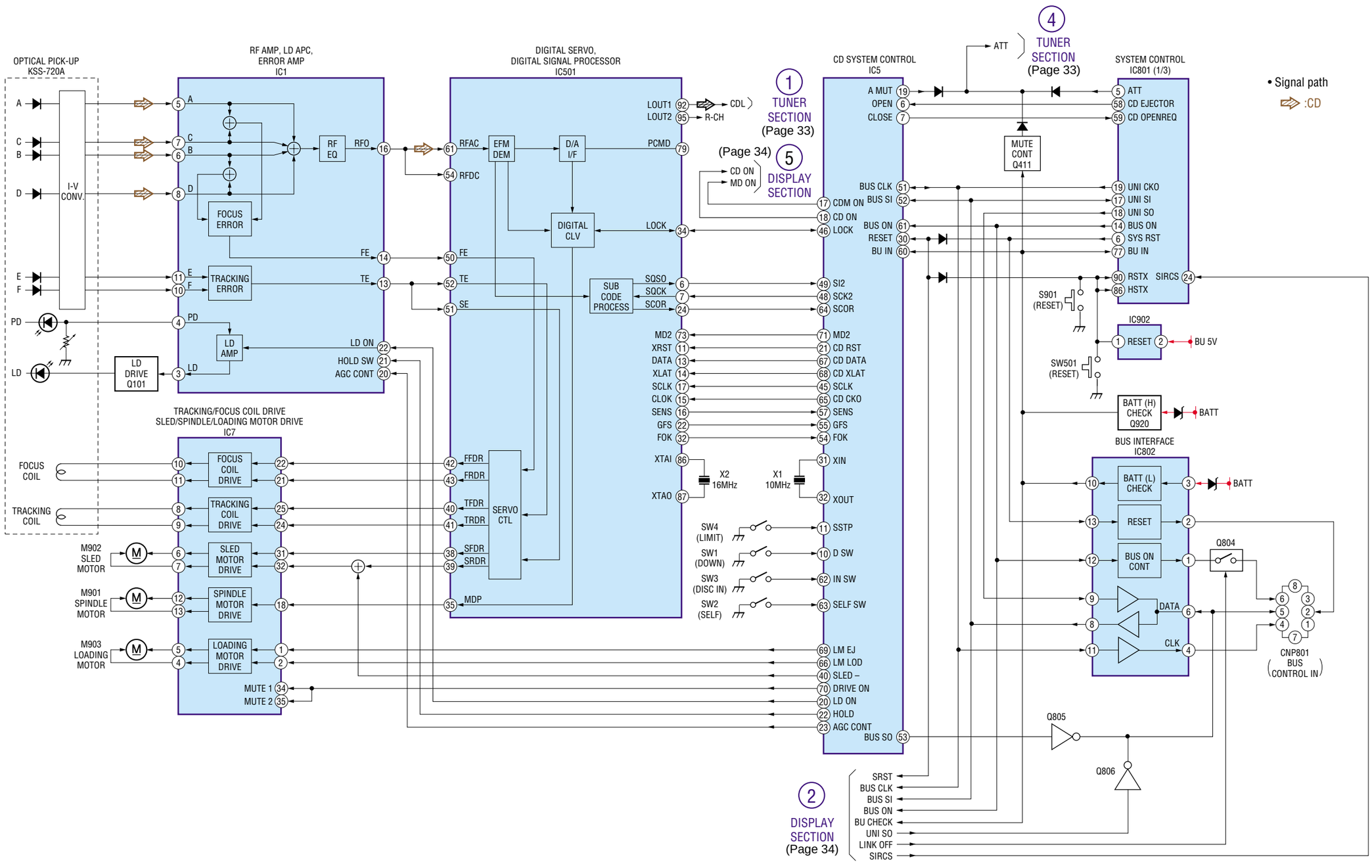
• IC801 MB90574BPMT-G-260-BND (SYSTEM CONTROL)

Pin No.	Pin Name	I/O	Pin Description
1	(NCO)	O	Not used. (Open)
2	(AMSIN)	I	Inter-music detection input (“H”: inter-music) (Fixed at “L” in this set.)
3	(AMSON)	O	AMS sens select output (Not used in this set.)
4	SP LATCH	O	Spectrum analyzer display data latch signal output to display micon.
5	ATT	O	System attenuate control output
6	$\overline{\text{SYSRST}}$	O	Resetting for slave micon of SONY BUS system.
7	(N/R)	O	Forward/Reverse select output (“L”: forward, “H”: reverse) (Not used in this set.)
8	VCC	—	Power supply pin (+5 V)
9	(NCO)	O	Not used. (Open)
10	E2PSIO	I/O	Tuner EEPROM communication input/output
11	E2PCKO	I/O	Tuner EEPROM communication input/output
12	FLS SI	I	Flash micon write data input
13	FLS SO	O	Flash micon write data output
14	$\overline{\text{BUS-ON}}$	O	BUS ON output
15	BEEP	O	Beep output
16	TELATT	I	Telephone mute input (“H”: mute ON)
17	UNISI	I	SONY BUS serial data input
18	UNISO	O	SONY BUS serial data output
19	UNICKO	O	SONY BUS serial clock output
20	IFWIDTH	O	Not used. (Open)
21, 22	(NCO)	O	Not used. (Open)
23	(MTLOUT)	O	Tape metal signal output (“H”: metal) (Not used in this set.)
24	SIRCS	I	Wireless remote data input
25	DSPSI	I	Digital signal processor serial data input
26	DSPSO	O	Digital signal processor serial data output (Not used in this set.)
27	DSPCKO	O	Digital signal processor clock output (Not used in this set.)
28	(DSPPLL)	O	Not used. (Open)
29	DSPMST	O	Digital signal processor master slave control output (Not used in this set.)
30	SW SHIFT	O	Tuner SW (Short Wave) signal output (“H”: SW signal receipt) (Not used in this set.)
31	$\overline{\text{VOLATT}}$	O	Electronic volume mute output (“L”: mute ON)
32	TU ATT	O	Tuner mute output (“H”: mute ON)
33	VSS	—	Ground
34	C	—	Power stabilization capacitor pin
35	DSPLAT	O	Digital signal processor latch output (Not used in this set.)
36	$\overline{\text{DSPRST}}$	O	Digital signal processor reset output (Not used in this set.)
37	SHIFT	O	DC/DC converter oscillation frequency shift output (“H”: shift output)
38	DVCC	—	VREF input of D/A converter.
39	DVSS	—	Ground of D/A converter.
40	FP CTRL	O	Front panel OPEN/CLOSE motor voltage control output
41	(NCO)	O	Not used. (Open)
42	AVCC	—	Analog power supply pin (+5 V)
43	AVRH	—	VREF+ input of A/D converter. (+5 V)
44	AVRL	—	VREF– input of A/D converter.
45	AVSS	—	Analog ground
46, 47	KEYIN0, 1	I	Key input 0, 1
48	RCIN0	I	Rotary commander input 0
49	(NCO)	—	Not used. (Open)
50	QUALITY	I	Noise detection input (Not used in this set.)
51	FM AGC	I	FM suppression level detection input
52	MPTH	I	Tuner multi path detection input
53	VSM	I	S-meter voltage detection input

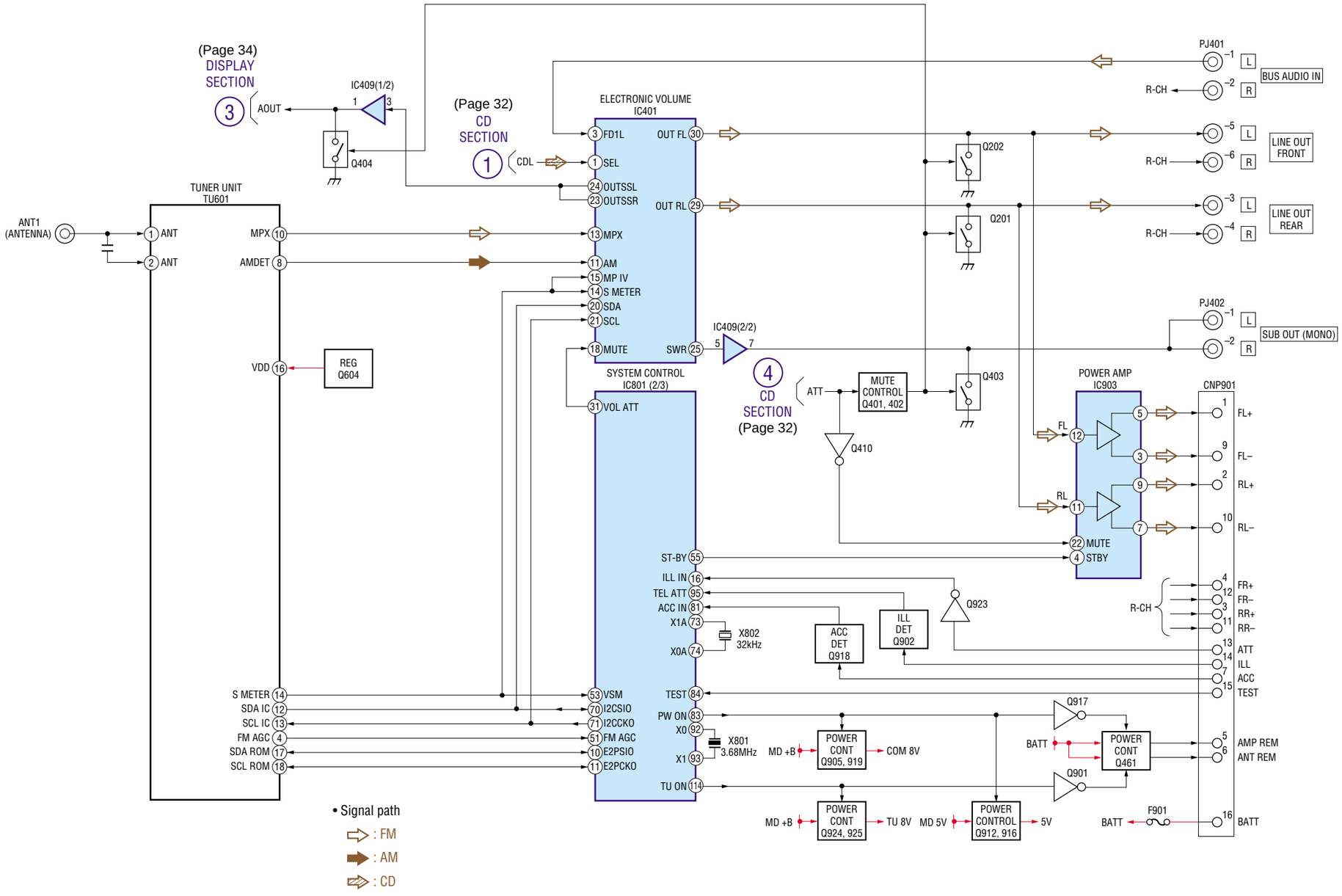
Pin No.	Pin Name	I/O	Pin Description
54	VCC	—	Power supply pin (+5 V)
55	ST-BY	O	Power amplifier drive output
56	NS MASK	O	Noise detection output (Not used in this set.)
57	(REEL)	I	Tape rotation detection input (Fixed at “L” in this set.)
58	CD EJECTOK	O	CD eject control output (Not used in this set.)
59	$\overline{\text{CD OPENREQ}}$	I	Front panel open request input
60 – 62	(POS0 – 2)	I	Mechanism deck position detection input (Fixed at “L” in this set.)
63	VSS	—	Ground
64	(POS3)	I	Mechanism deck position detection input (Fixed at “L” in this set.)
65	PWM	I	Oscillation frequency count input
66	(LMLOD)	O	Loading motor control output (Loading direction) (Not used in this set.)
67	(CM-ON)	O	Capstan motor drive power supply output (Not used in this set.)
68	(TAPEON)	O	Tape drive power supply output (Not used in this set.)
69	$\overline{\text{FLASH-W}}$	I	Flash write input
70	I2CSIO	I/O	I^2C BUS serial data input/output
71	I2CCKO	O	I^2C BUS serial clock output
72	RC IN1	I	Rotary commander input 1
73	X1A	O	Sub ceramic oscillator output (32 kHz)
74	X0A	I	Sub ceramic oscillator input (32 kHz)
75	DAVN	I	RDS IC data acquisition detection input (Not used in this set.)
76	CDON-IN	I	CD mechanism power control input (Not used in this set.)
77	BU IN	I	Backup power detection input
78	DSPREADY	I	Digital signal processor ready input (Not used in this set.)
79	KEY ACK	I	Key input acknowledge
80	$\overline{\text{ADON}}$	O	Power control output of A/D converter.
81	$\overline{\text{ACCIN}}$	I	Accessory key ON input
82	FLSW PWON	O	Flash power ON output
83	PW ON	O	System power control output
84	$\overline{\text{TESTIN}}$	I	Test mode initial setting detection input
85	RAM BU	I	RAM reset detection input
86	HSTX	I	Hardware standby input (Connect to pin ⑨⓪ (RSTX).)
87	MD2	I	Operation mode input (Connect to ground in this set.)
88, 89	MD1, 0	I	Operation mode input (Connect to VCC in this set.)
90	RSTX	I	Reset input
91	VSS	—	Ground
92	X0	I	Main ceramic oscillator input (3.68 MHz)
93	X1	O	Main ceramic oscillator output (3.68 MHz)
94	VCC	—	Power supply pin (+5 V)
95	$\overline{\text{ILL IN}}$	I	Illumination control input
96	$\overline{\text{I-DET}}$	I	Front panel OPEN/CLOSE motor current abnormal detection input
97	MOT–	O	Front panel OPEN/CLOSE motor control output (– direction)
98	MOT+	O	Front panel OPEN/CLOSE motor control output (+ direction)
99	$\overline{\text{CLOSESW}}$	I	Front panel CLOSE detection switch input
100	$\overline{\text{OPENSW}}$	I	Front panel OPEN detection switch input
101 – 103	SCODE0 – 2	I	Security code setting port 0 – 2 (Fixed at “L”)
104	DSTSETTING1	I	Destination setting port (Fixed at “L” in this set.)
105	DSTSETTING2	I	Destination setting port (Fixed at “L” in this set.)
106	$\overline{\text{BOOT}}$	O	Display micon write control output
107	(NCO)	I	Not used. (Open)
108	DSPON	O	Digital signal processor power control output (Not used in this set.)
109	(NCO)	O	Not used. (Open)
110	EMPH-IN	I	Emphasis input (Not used in this set.)
111	(PACKSW)	I	Tape with/without detection input (Not used. (Fixed at “L” in this set.))

Pin No.	Pin Name	I/O	Pin Description
112	$\overline{\text{4V SEL}}$	I	4 V select input (“H” in this set.)
113	(P-SEL)	I	Power select initial setting (Fixed at “L” in this set.)
114	TUNON	O	Tuner power control output
115, 116	LED SW1, 2	O	Operation/display side illumination select control output 1, 2
117, 118	(NCO)	O	Not used. (Open)
119	VSS	—	Ground
120	(DOLBY)	O	DOLBY B ON/OFF select output (“H”: ON) (Not used in this set.)

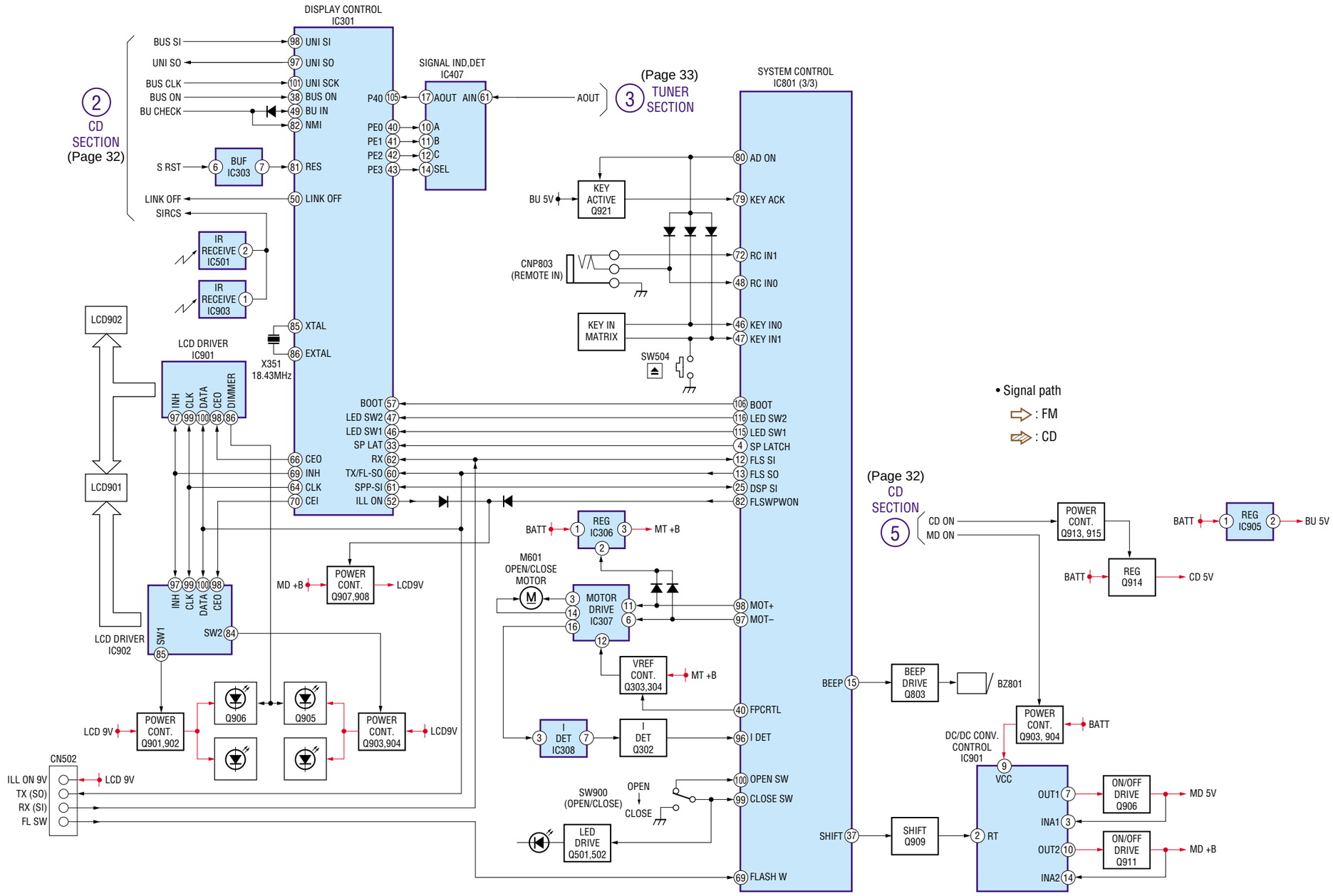
4-2. BLOCK DIAGRAM — CD SECTION —



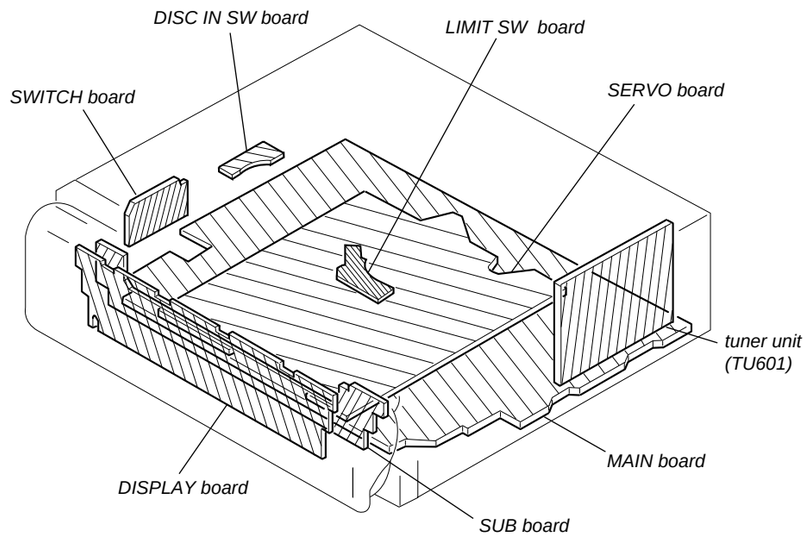
4-3. BLOCK DIAGRAM — TUNER SECTION —



4-4. BLOCK DIAGRAM — DISPLAY SECTION —



4-5. CIRCUIT BOARDS LOCATION



THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.
(In addition to this, the necessary note is printed in each block.)

for schematic diagram:

- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- % : indicates tolerance.
- △ : internal component.
- ▭ : panel designation.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- B+ : B+ Line.
- Power voltage is dc 14.4V and fed with regulated dc power supply from ACC and BATT cords.
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  - ⇨ : FM
  - ➡ : AM/MW
  - ⇨ : CD

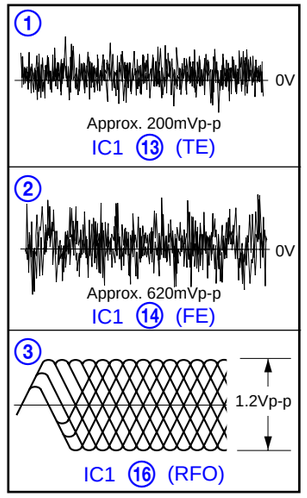
for printed wiring boards:

- o—— : parts extracted from the component side.
- —— : parts extracted from the conductor side.
- ○ : Through hole.
- ▬ : Pattern from the side which enables seeing. (The other layer's patterns are not indicated.)

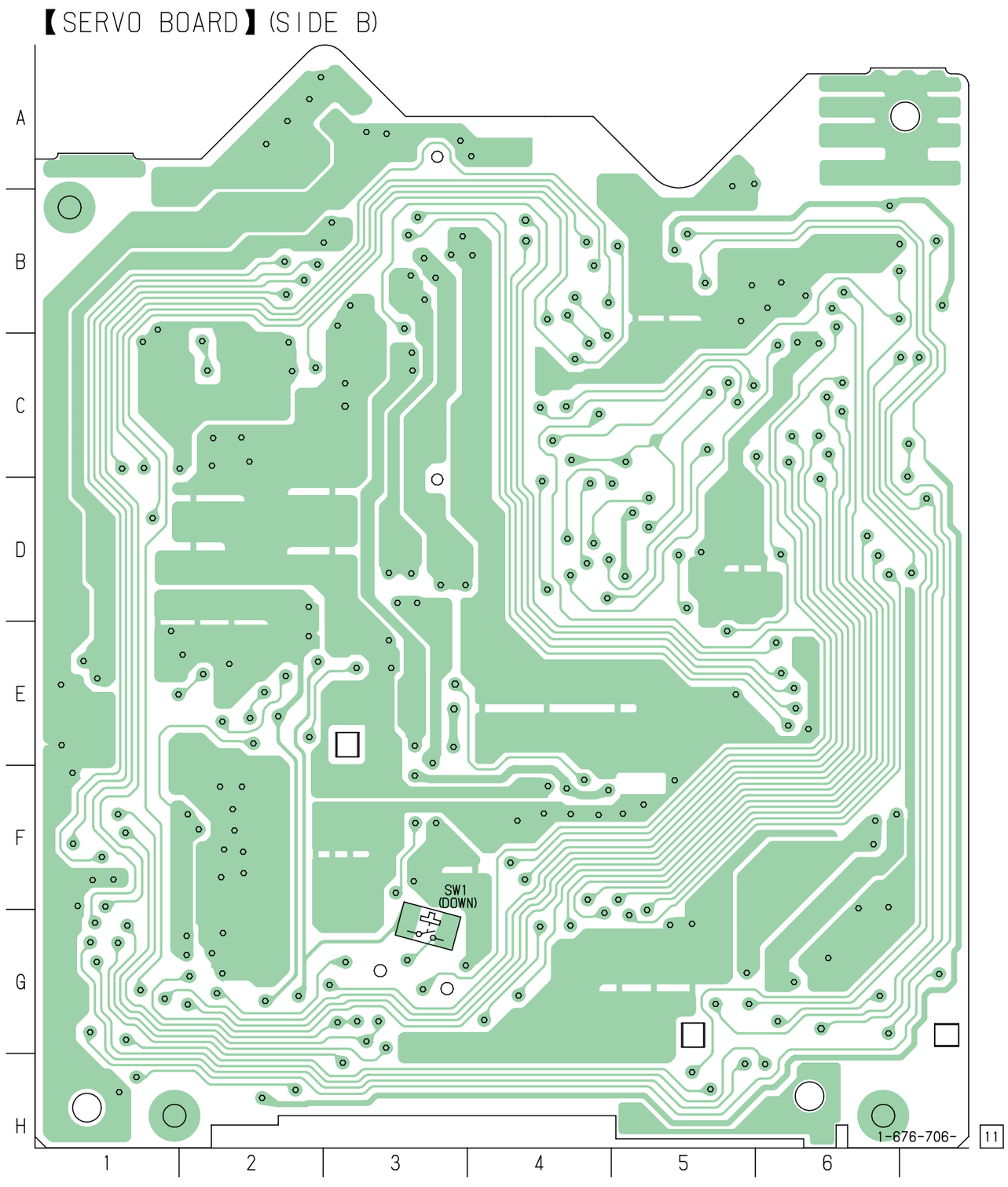
Caution:

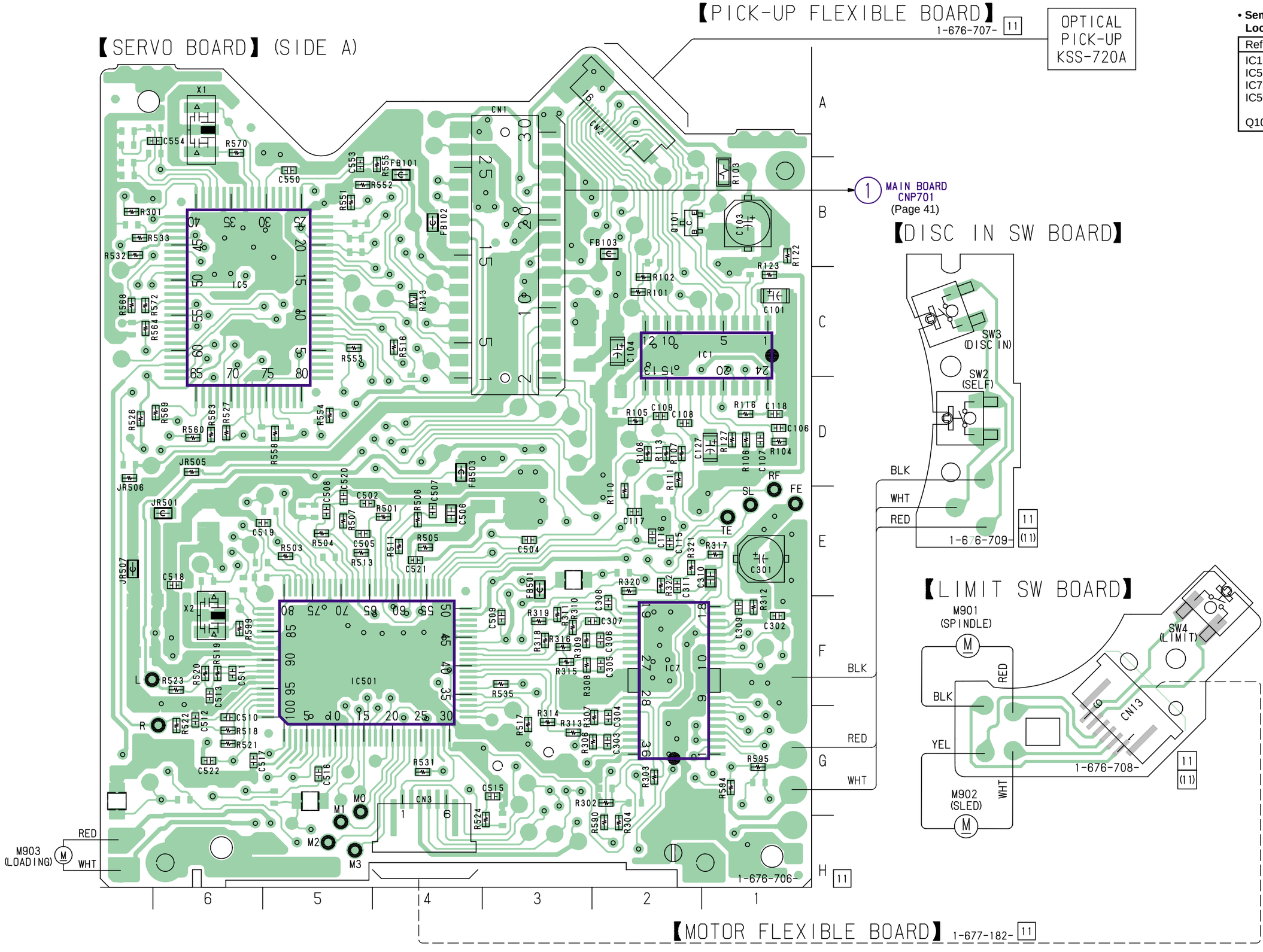
Pattern face side: (Side B)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Side A)	Parts on the parts face side seen from the parts face are indicated.

• **Waveforms** (Servo Section)
(MODE:CD PLAY)



4-6. PRINTED WIRING BOARDS — CD MECHANISM SECTION —



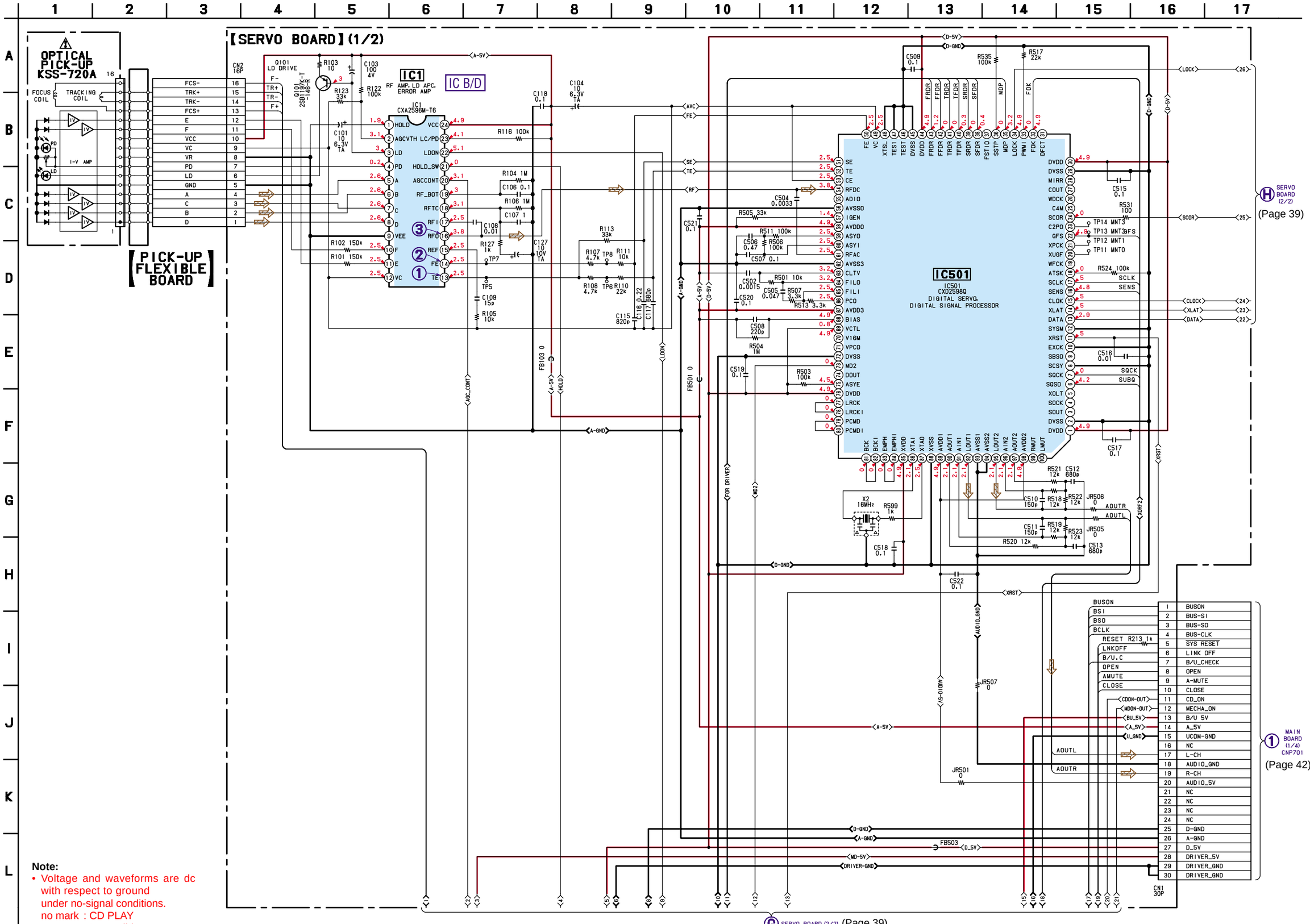


• **Semiconductor Location**

Ref. No.	Location
IC1	C-1
IC5	C-6
IC7	F-2
IC501	F-5
Q101	B-2

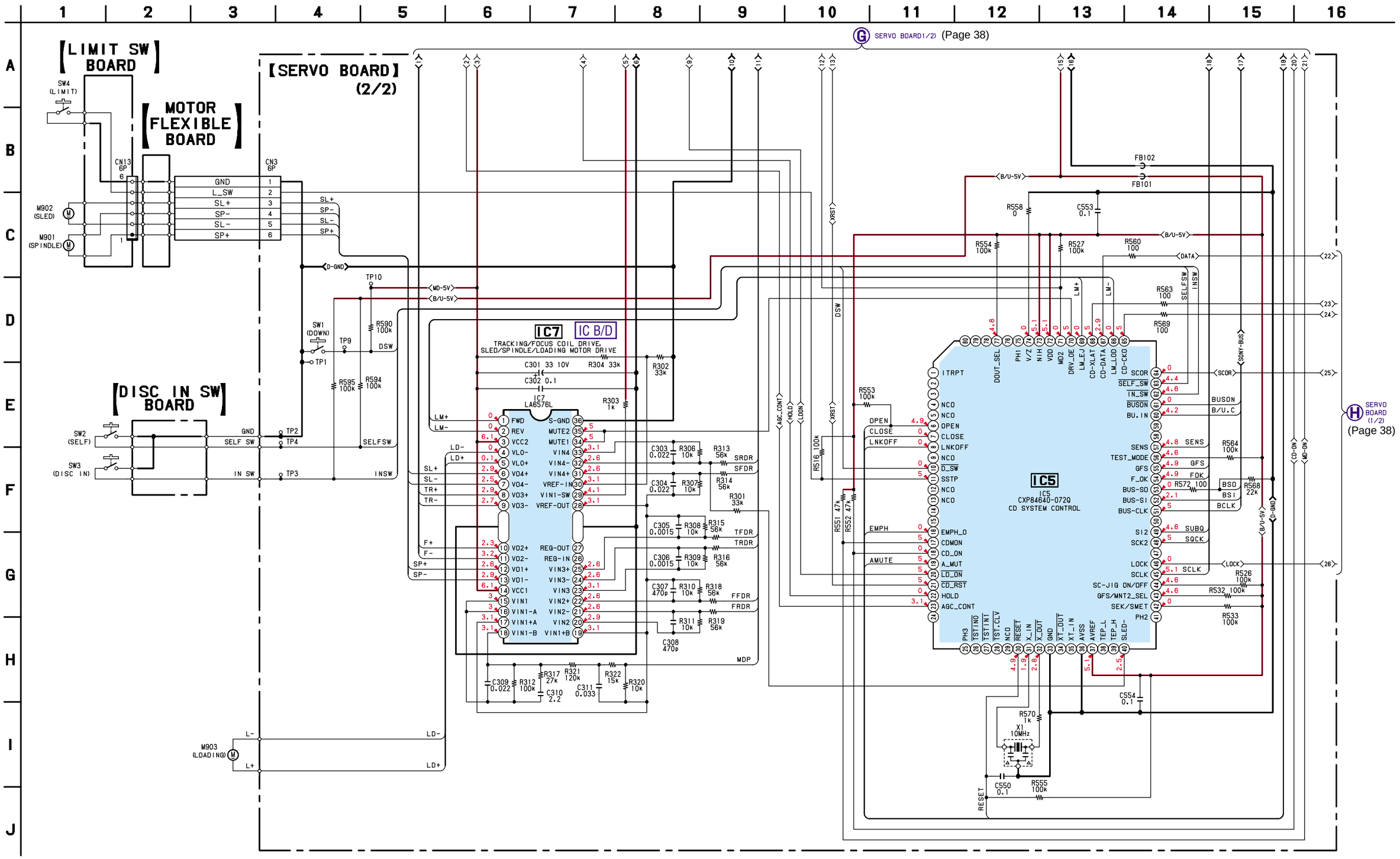
4-7. SCHEMATIC DIAGRAM — CD MECHANISM SECTION (1/2) —

• Refer to page 35 for Waveforms.
• Refer to page 50 for IC Block Diagrams.



Note:
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
  no mark : CD PLAY
  ✻ : Impossible to measure

4-8. SCHEMATIC DIAGRAM — CD MECHANISM SECTION (2/2) — • Refer to page 50 for IC Block Diagrams.



Note:

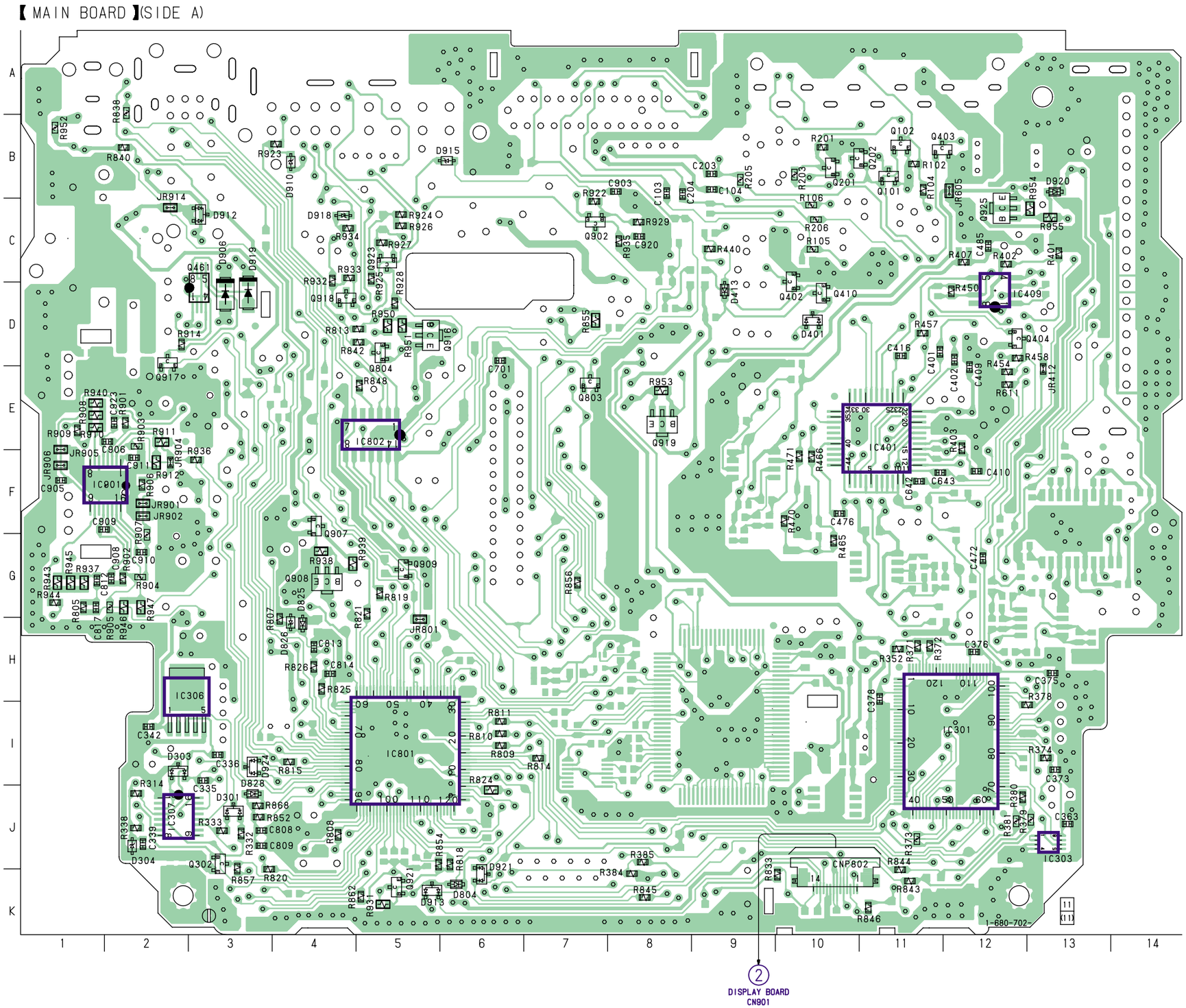
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
  no mark : CD PLAY
  ＊ : Impossible to measure

4-9. PRINTED WIRING BOARDS — MAIN SECTION —

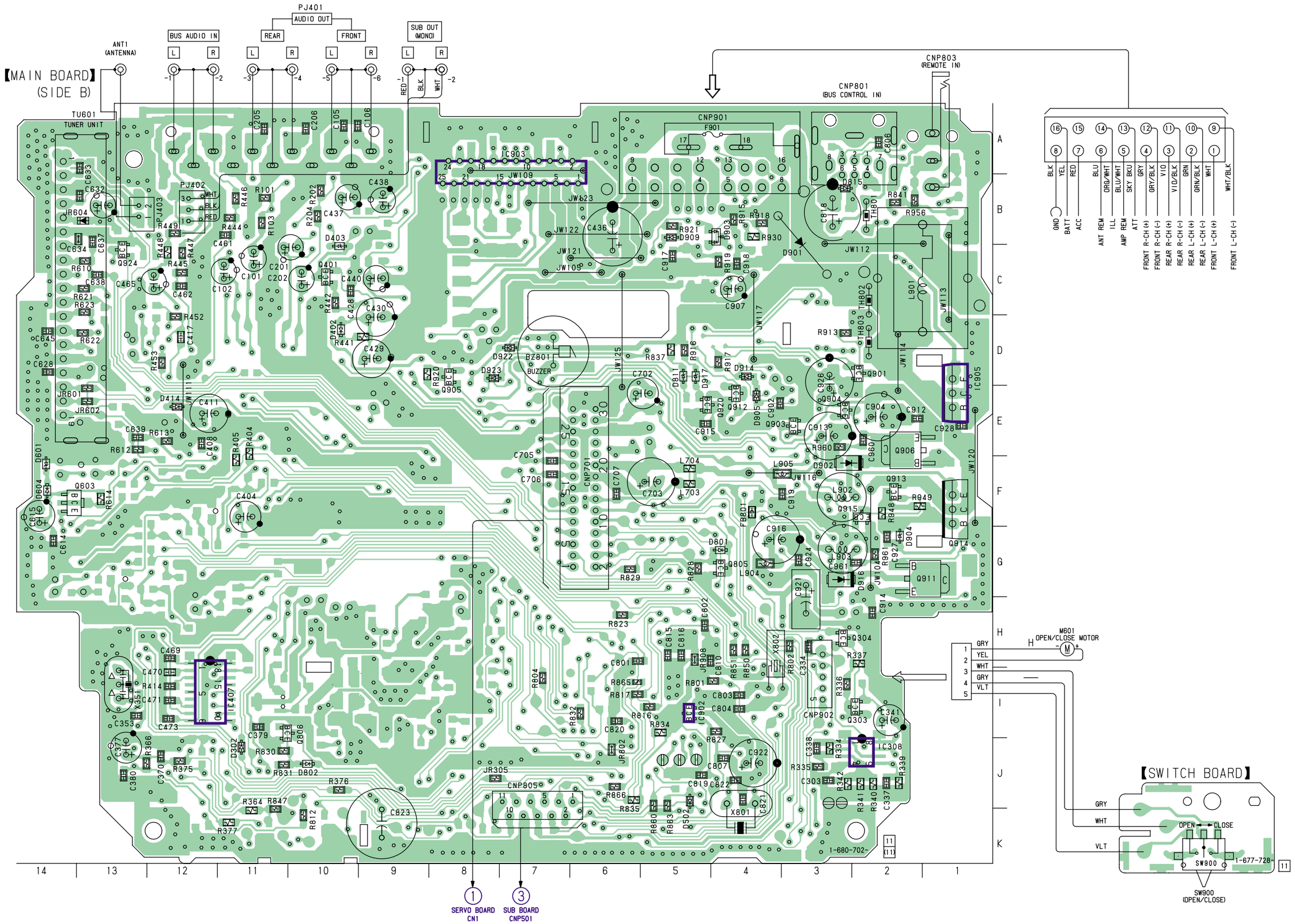
• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D301	J-3	IC802	E-5
(D302)	J-11	IC901	F-2
D303	I-2	(IC902)	I-5
D304	J-2	(IC903)	A-7
D401	D-10	(IC905)	E-1
(D402)	D-10		
(D403)	C-10	Q101	B-11
(D502)	J-5	Q102	B-11
(D601)	F-14	Q201	B-10
(D604)	F-14	Q202	B-11
(D801)	G-4	Q302	J-3
(D802)	J-10	(Q303)	I-2
D804	K-6	(Q304)	H-3
(D811)	D-5	(Q401)	C-10
(D815)	B-3	Q402	D-10
D825	H-4	Q403	B-12
D826	H-4	Q404	D-12
D828	J-3	Q410	D-10
(D901)	B-3	Q461	D-3
(D902)	F-3	(Q603)	F-13
(D903)	B-4	Q803	E-7
(D904)	G-2	Q804	D-5
(D905)	E-4	(Q805)	G-4
D906	D-3	(Q806)	I-10
(D909)	B-5	(Q901)	D-2
D910	B-4	Q902	C-7
D912	C-3	(Q903)	E-3
D913	K-5	(Q904)	E-3
(D914)	D-4	(Q905)	D-8
D915	B-6	(Q906)	E-2
(D916)	G-3	Q907	F-4
(D917)	D-5	Q908	G-4
D918	C-4	Q909	G-5
D919	D-3	(Q911)	G-1
D921	K-6	(Q912)	E-4
(D922)	D-7	(Q913)	F-2
(D923)	D-8	(Q914)	F-1
D924	I-3	(Q915)	F-2
		Q916	D-5
IC301	I-12	Q917	D-2
IC303	J-13	Q918	D-4
IC306	H-2	Q919	E-8
IC307	J-2	(Q920)	E-5
(IC308)	J-2	Q921	K-5
IC401	E-11	Q923	C-5
(IC407)	I-12	(Q924)	C-13
IC409	D-12	Q925	C-12
IC801	I-5		

( ) : SIDE B



(Page 48)


【MAIN BOARD】
(SIDE B)
PJ401
AUDIO OUT
BUS AUDIO IN
REAR
FRONT
SUB OUT (MONO)
ANT1 (ANTENNA)
TU601 TUNER UNIT
CNP803 (REMOTE IN)
CNP801 (BUS CONTROL IN)
CNP901
F901
BZ801 BUZZER
M601 OPEN/CLOSE MOTOR
【SWITCH BOARD】
SW900 (OPEN/CLOSE)
1-680-702-
1-677-728-
SERVO BOARD CN1
SUB BOARD CNP501
(Page 37) (Page 46)

4-10. SCHEMATIC DIAGRAM — MAIN SECTION (1/4) — • Refer to page 50 for IC Block Diagrams.

Note:
- Voltage is dc with respect to ground under no-signal (detuned) condition.
  no mark : FM
  < > : CD PLAY

【MAIN BOARD】(1/4)

IC B/D

IC802 BA8270F-E2 BUS INTERFACE

IC901 CD/DC CONV CONTROL

IC905 REG C905 TA78DL06AS

IC903 POWER AMP IC903 TA8268HS

CNP901 16P

CNP801 (BUS CONTROL IN)

CNP803 (REMOTE IN)

Q461 POWER CONTROL

Q901 INVERTER

Q917 INVERTER

Q923 INVERTER

Q805 INVERTER

Q806 INVERTER

Q410 INVERTER

Q909 SHIFT

Q911 ON/OFF DRIVE

Q803 BEEP DRIVE

Q906 ON/OFF DRIVE

Q918 ACC DET

Q920 BU DET

Q902 ILL DET

Q903, 904 POWER CONTROL

Q905, 919 POWER CONTROL

Q912, 916 POWER CONTROL

Q913, 915 POWER CONTROL

Q924, 925 POWER CONTROL

Q907, 908 POWER CONTROL

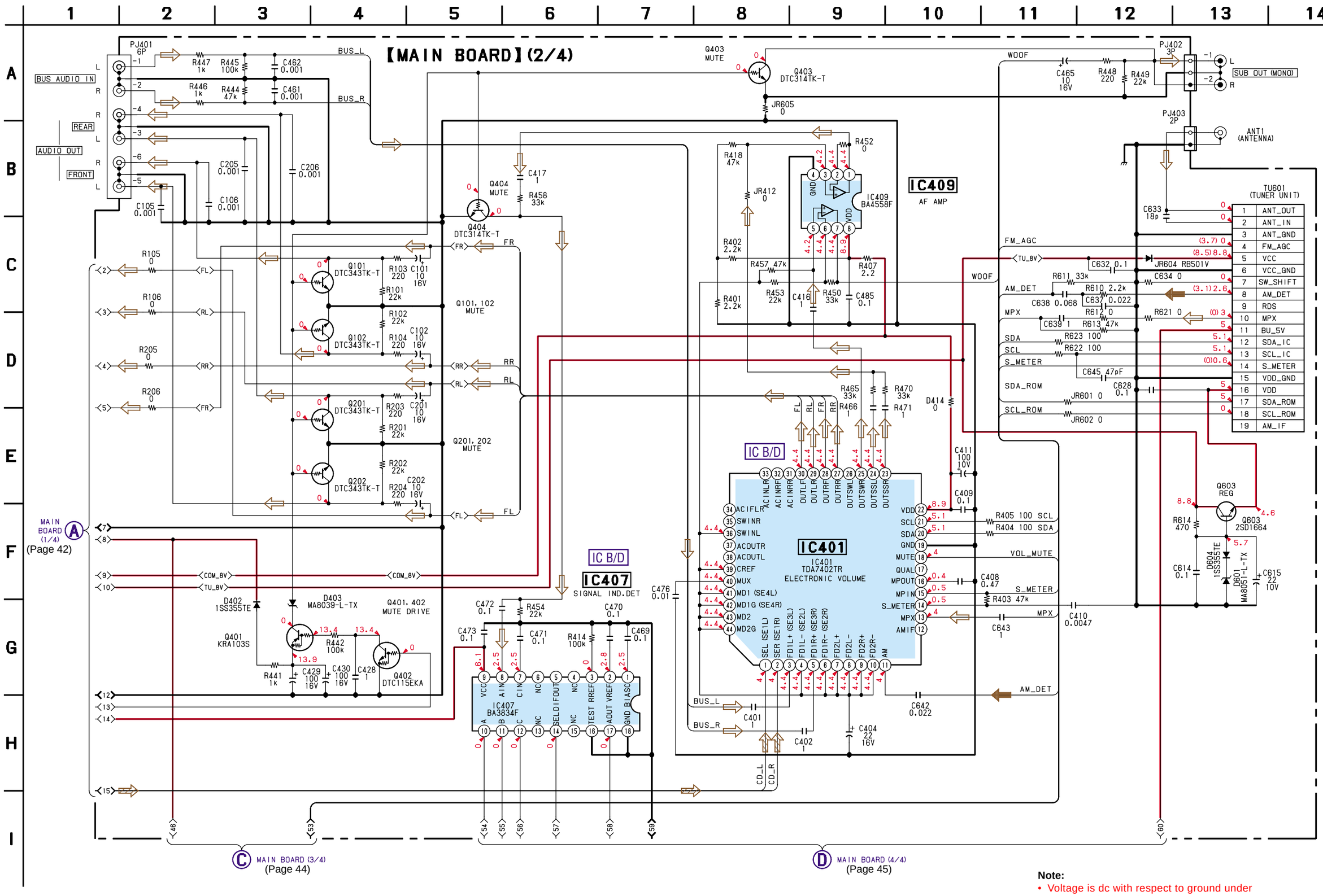
Q914 REG

(Page 38)
SERVO BOARD (1/2)
CN1

30	DRIVER_GND	DRIVER_GND	29
28	DRIVER_5V	D_5V	27
26	A-GND	D-GND	25
24	NC	NC	23
22	NC	NC	21
20	AUDIO_5V	R-CH	19
18	AUDIO_GND	L-CH	17
16	NC	UCOM-GND	15
14	A_5V	B/U_5V	13
12	MD_ON	CD_ON	11
10	CLOSE	A-MUTE	9
8	OPEN	B/U_CHECK	7
6	LINK_OFF	SYS_RESET	5
4	BUS-CLK	BUS-SO	3
2	BUS-SI	BUSON	1

(A) MAIN BOARD (2/4) (Page 43)
(B) MAIN BOARD (3/4) (Page 44)
(F) MAIN BOARD (4/4) (Page 45)

4-11. SCHEMATIC DIAGRAM — MAIN SECTION (2/4) — • Refer to page 50 for IC Block Diagrams.



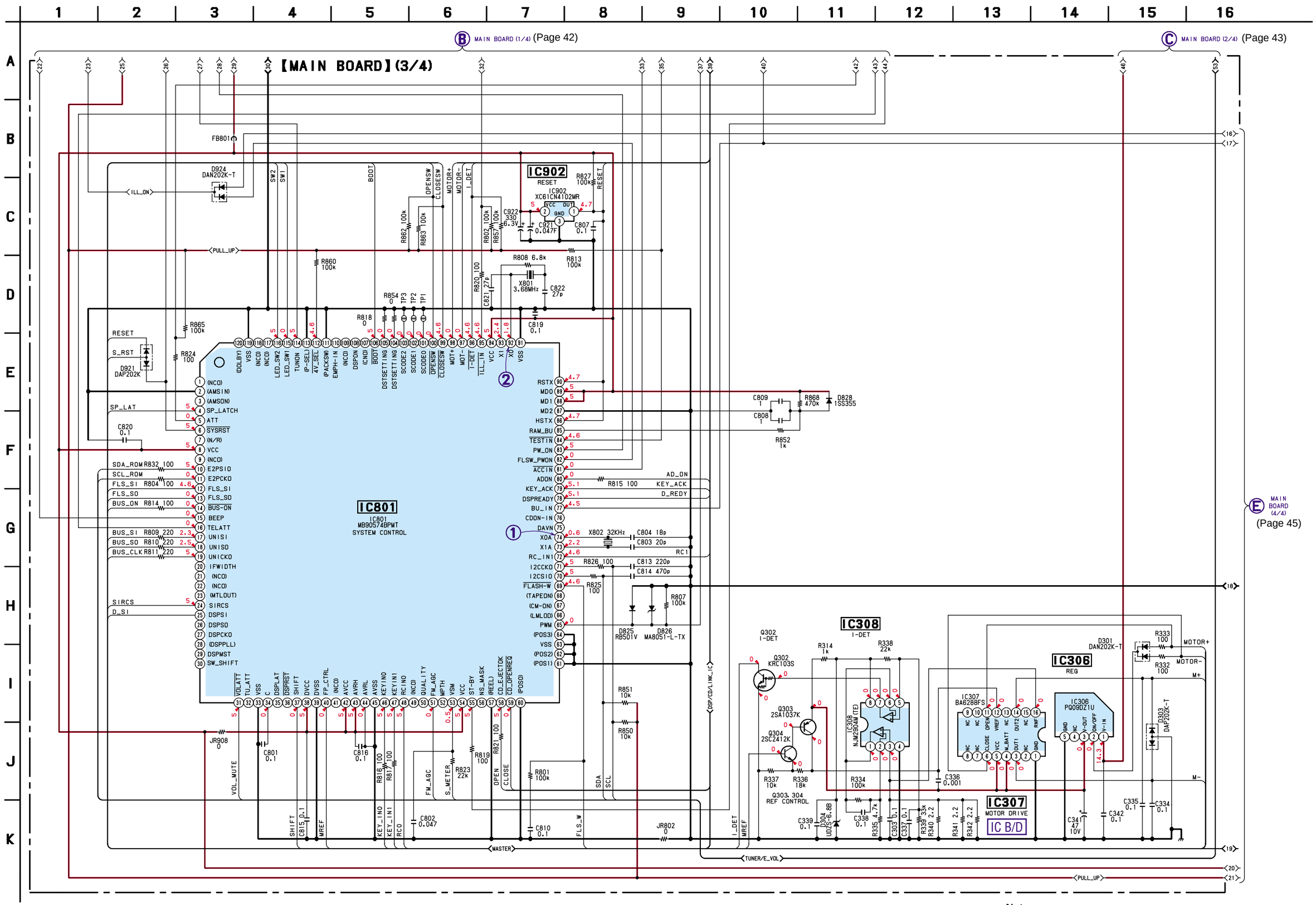
Note:

- Voltage is dc with respect to ground under no-signal (detuned) condition.
  no mark : FM
  ( ) : AM

• Refer to page 47 for Waveforms.

4-12. SCHEMATIC DIAGRAM — MAIN SECTION (3/4) —

• Refer to page 50 for IC Block Diagrams.



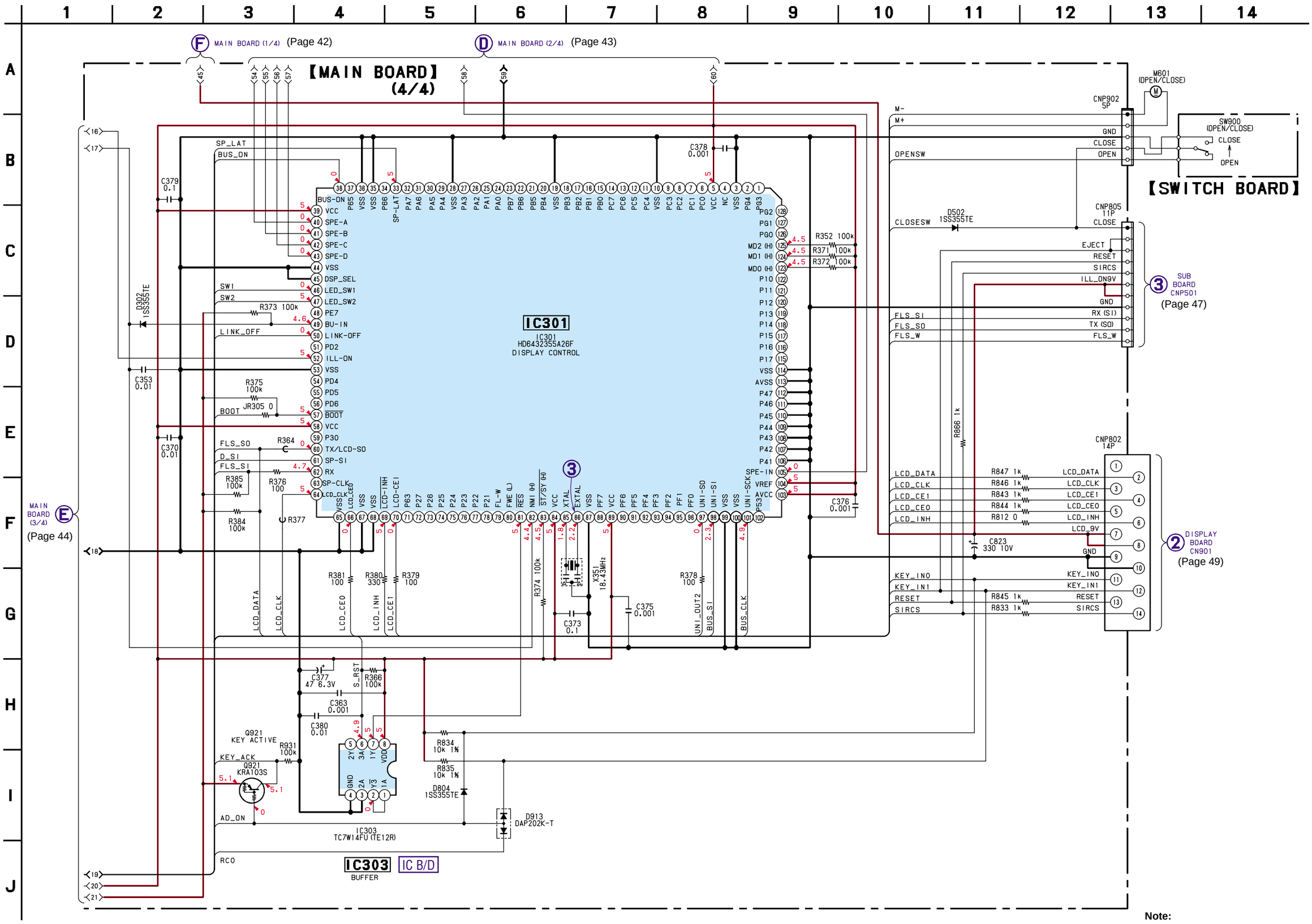
Note:

• Voltage is dc with respect to ground under no-signal (detuned) condition.
no mark : FM

• Refer to page 47 for Waveforms.

4-13. SCHEMATIC DIAGRAM — MAIN SECTION (4/4) —

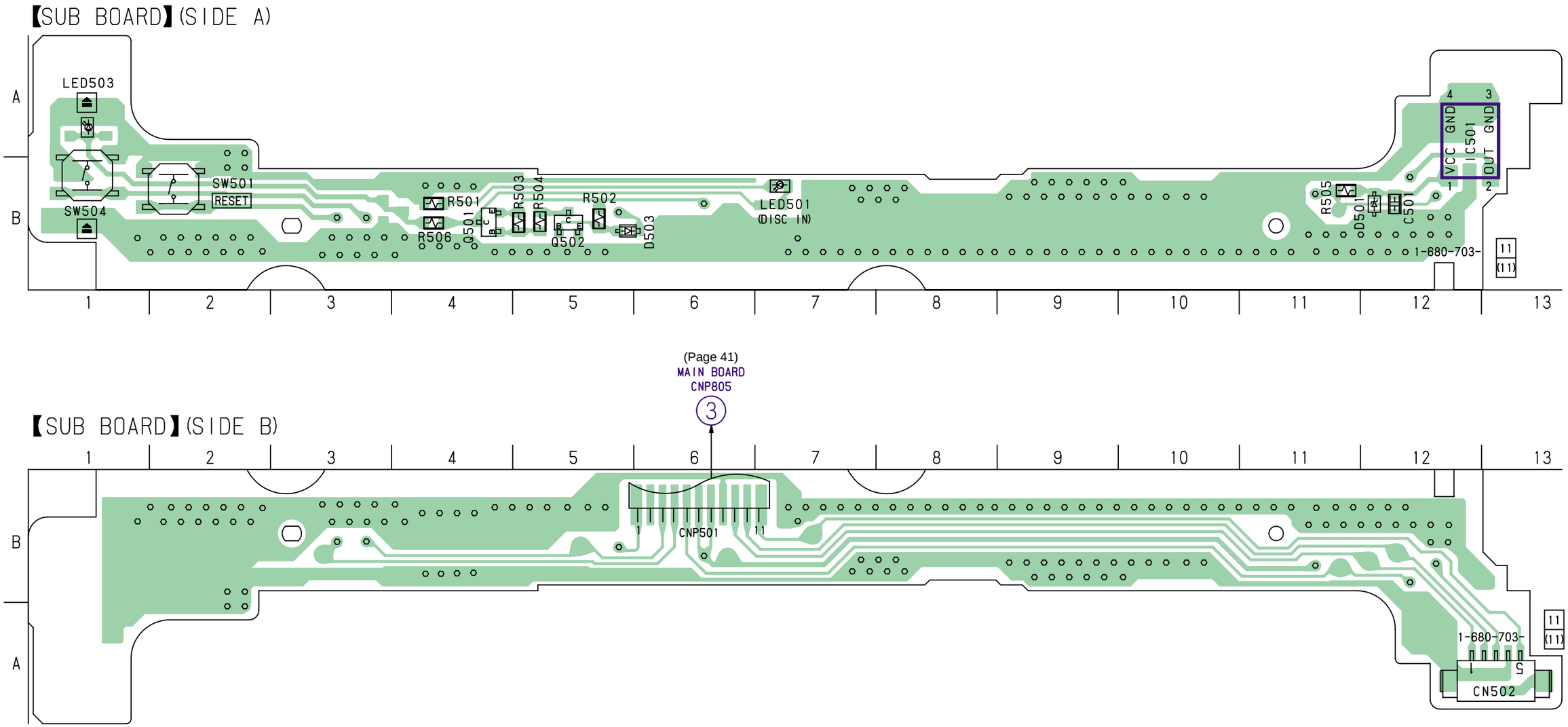
• Refer to page 50 for IC Block Diagrams.



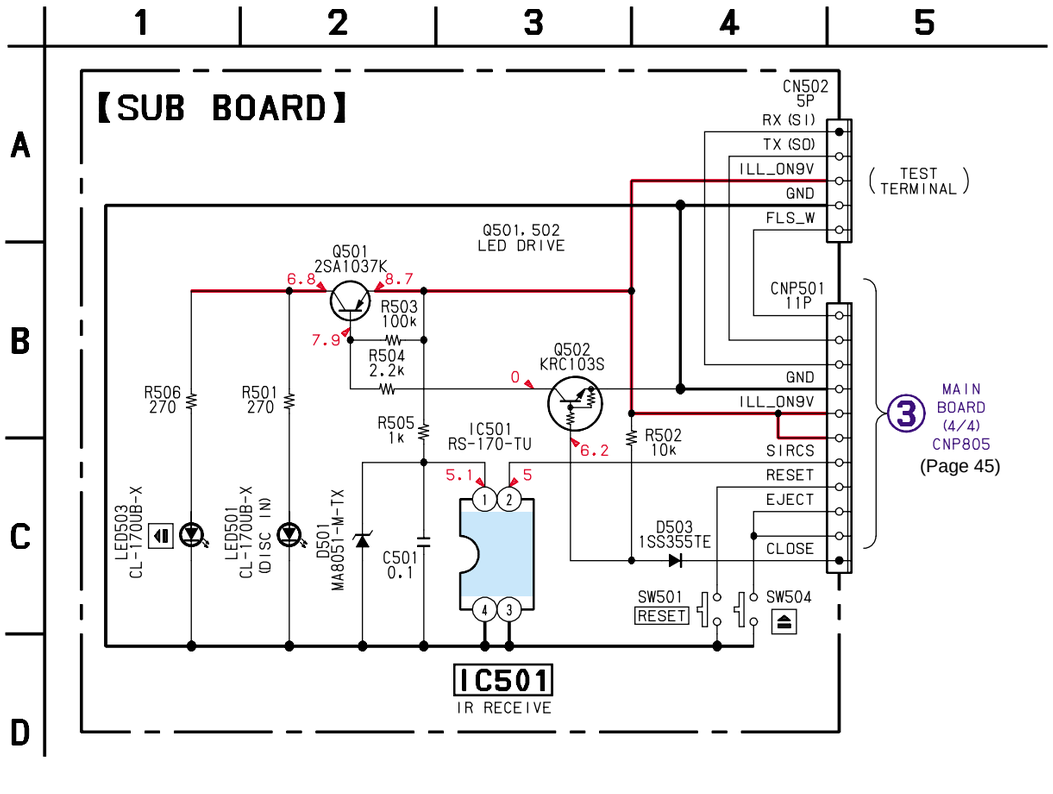
Note:

- Voltage is dc with respect to ground under no-signal (detuned) condition.
  no mark : FM

4-14. PRINTED WIRING BOARD — SUB SECTION —

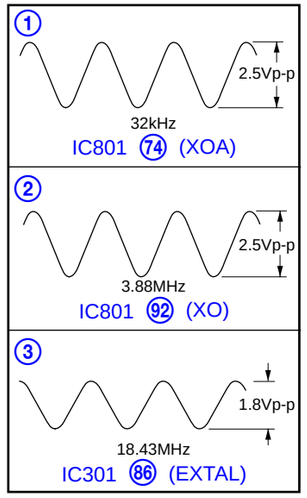


4-15. SCHEMATIC DIAGRAM — SUB SECTION —

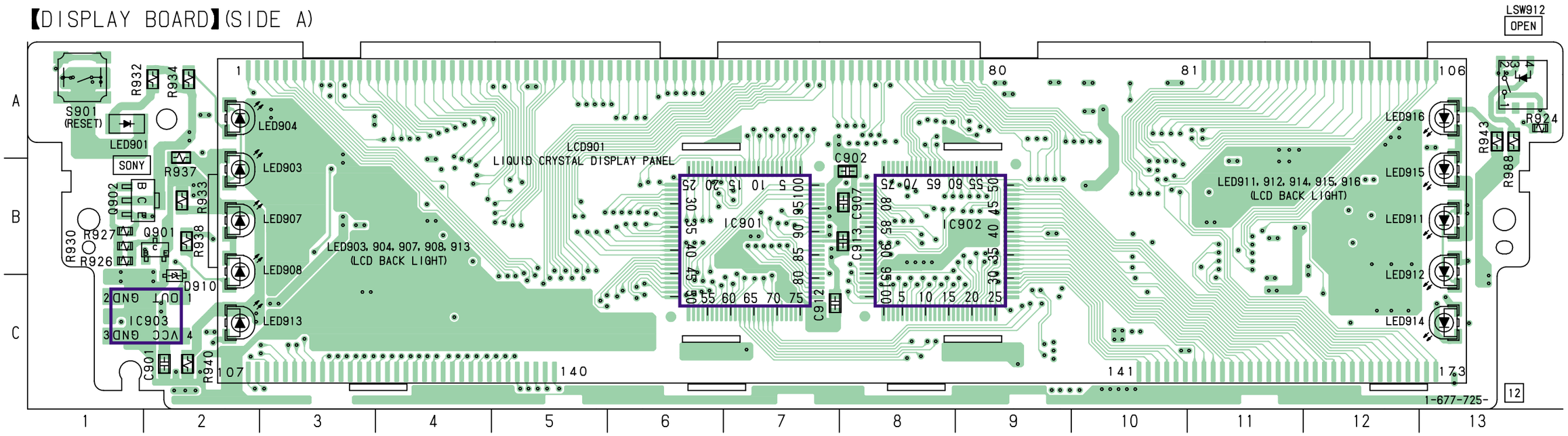


Note:
- Voltage is dc with respect to ground under no-signal (detuned) condition.
  no mark : FM

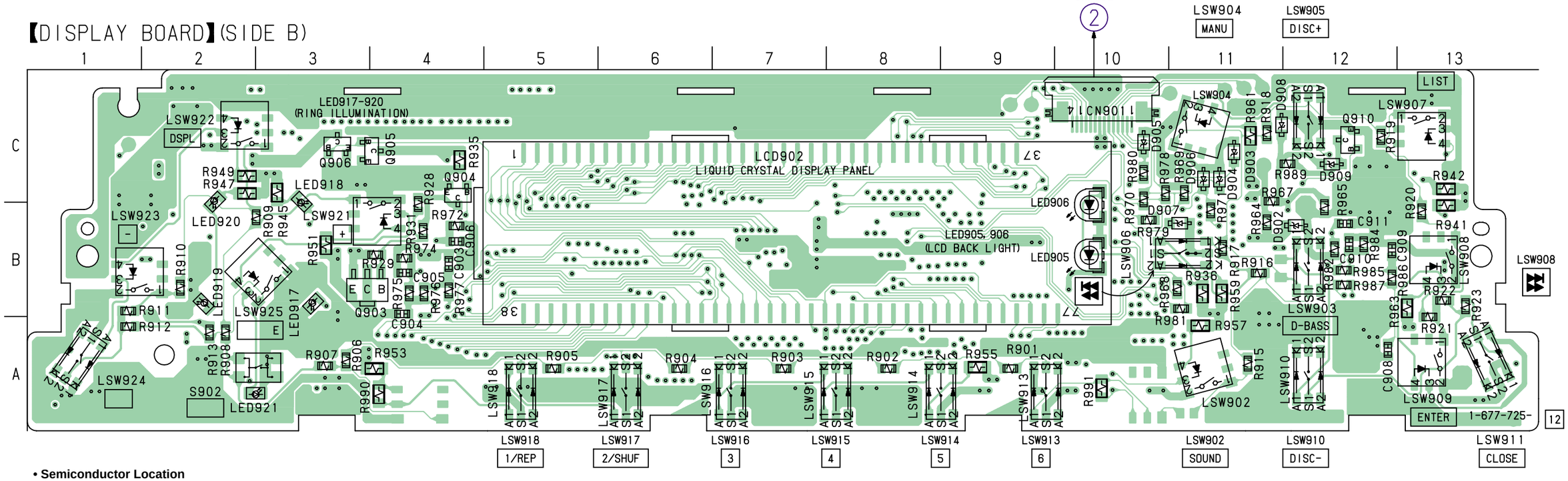
- **Waveforms** (Main Section)
  (MODE:CD PLAY)



4-16. PRINTED WIRING BOARD — DISPLAY SECTION —



(Page 40)
MAIN BOARD
CNP802
2



• **Semiconductor Location**

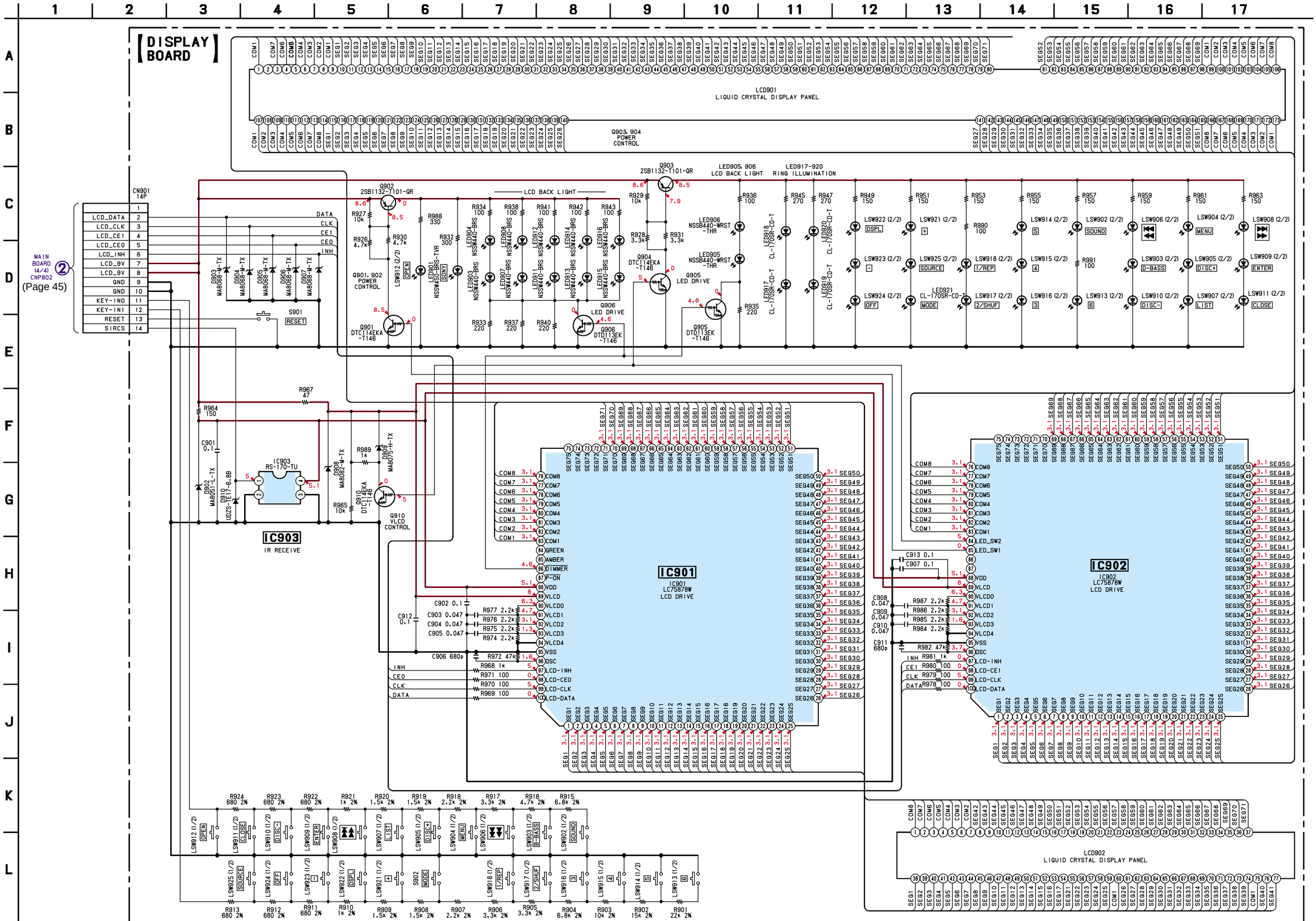
Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
(D902)	B-12	IC902	B-8	LED912	B-13	Q901	B-2
(D903)	C-11	IC903	C-1	LED913	C-2	Q902	B-2
(D904)	C-11			LED914	C-13	(Q903)	B-4
(D905)	C-10	LED901	A-1	LED915	B-13	(Q904)	C-4
(D906)	C-11	LED903	B-2	LED916	A-13	(Q905)	C-4
(D907)	B-11	LED904	A-2	(LED917)	B-3	(Q906)	C-3
(D908)	C-11	(LED905)	B-10	(LED918)	C-3	(Q910)	C-12
(D909)	C-12	(LED906)	B-10	(LED919)	B-2		
D910	B-2	LED907	B-2	(LED920)	C-2		
		LED908	B-2	(LED921)	A-3		
IC901	B-7	LED911	B-13				

( ) : SIDE B

Note on Schematic Diagram:

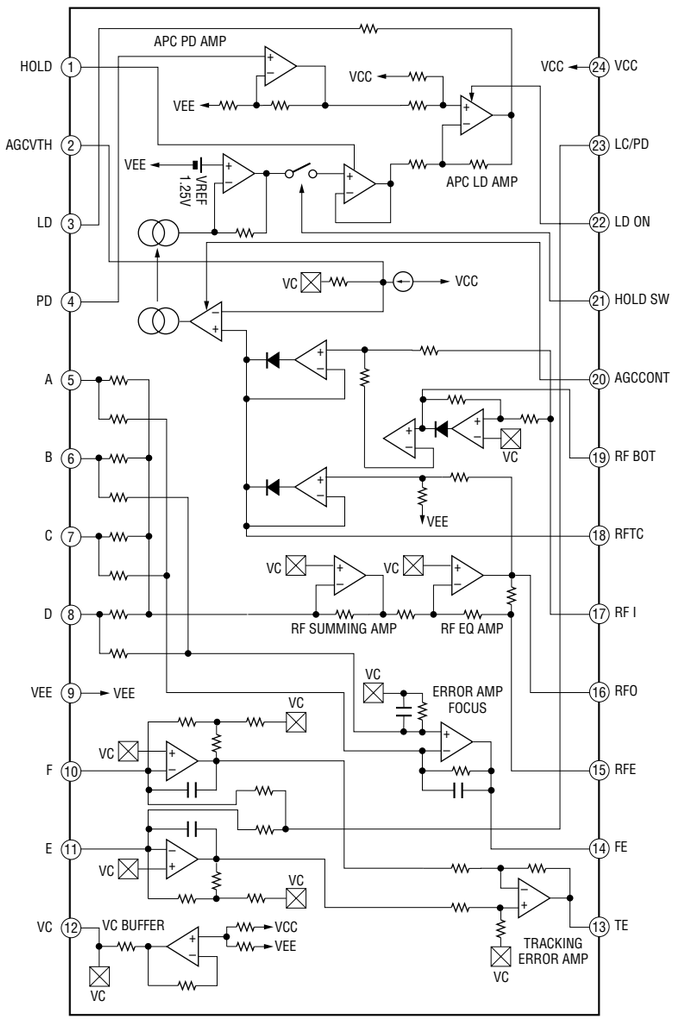
• Voltage is dc with respect to ground under no-signal (detuned) condition.
no mark : FM

4-17. SCHEMATIC DIAGRAM — DISPLAY SECTION —

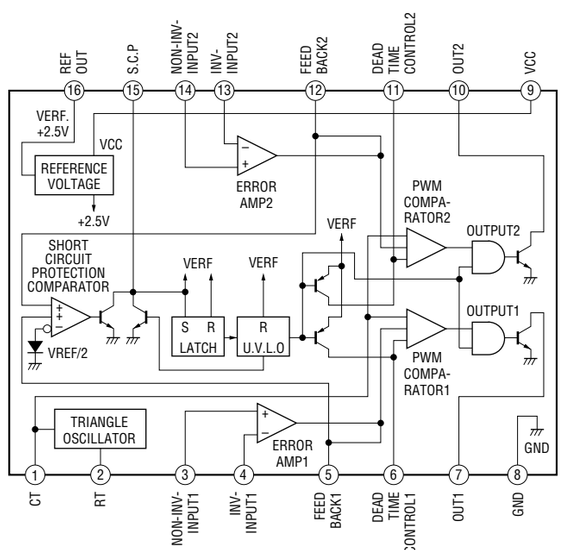


• IC Block Diagrams

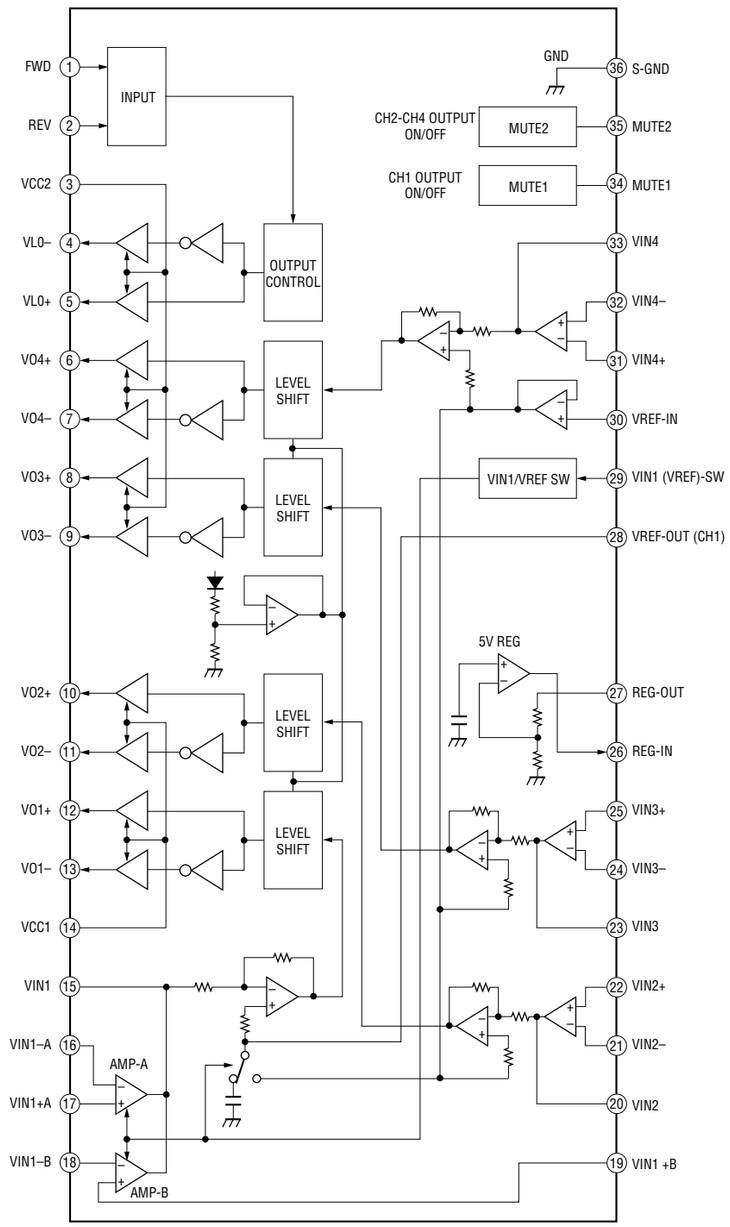
IC1 CXA2596M-T6



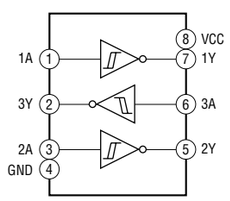
IC901 TL1451ACDB-E20



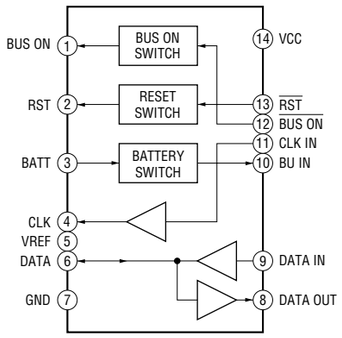
IC7 LA6556L-TE-L



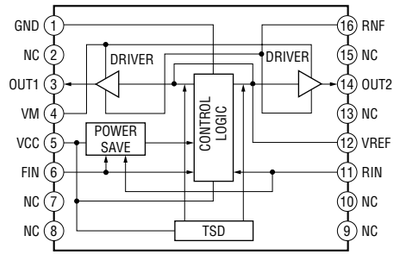
IC303 TC7W14FU (TE12R)



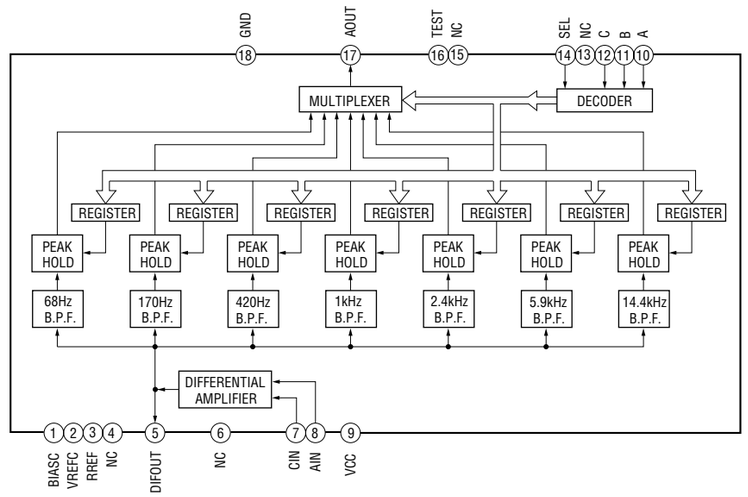
IC802 BA8270F-E2



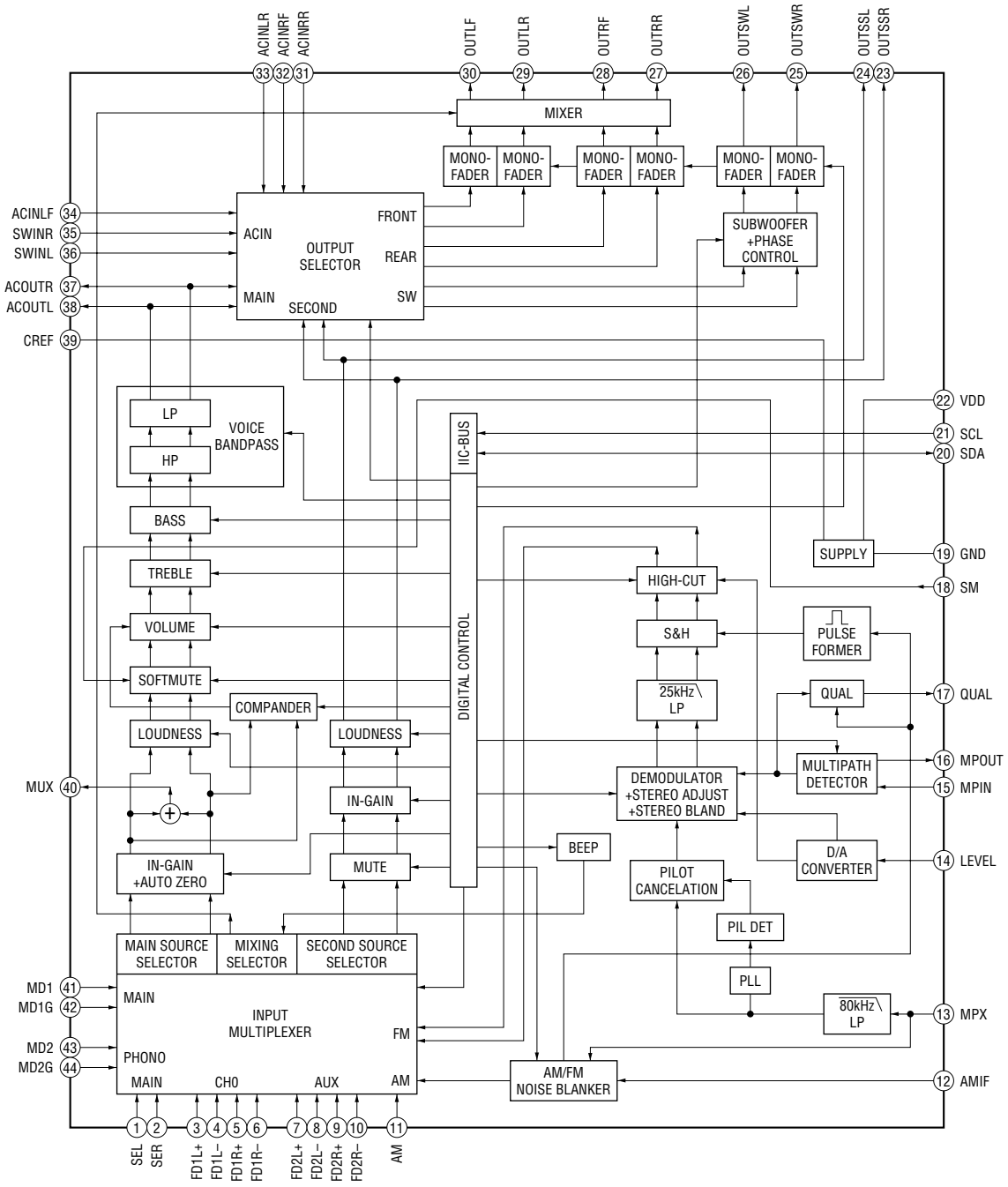
IC307 BA6288FS-E2



IC407 BA3834F



IC401 TDA7402TR

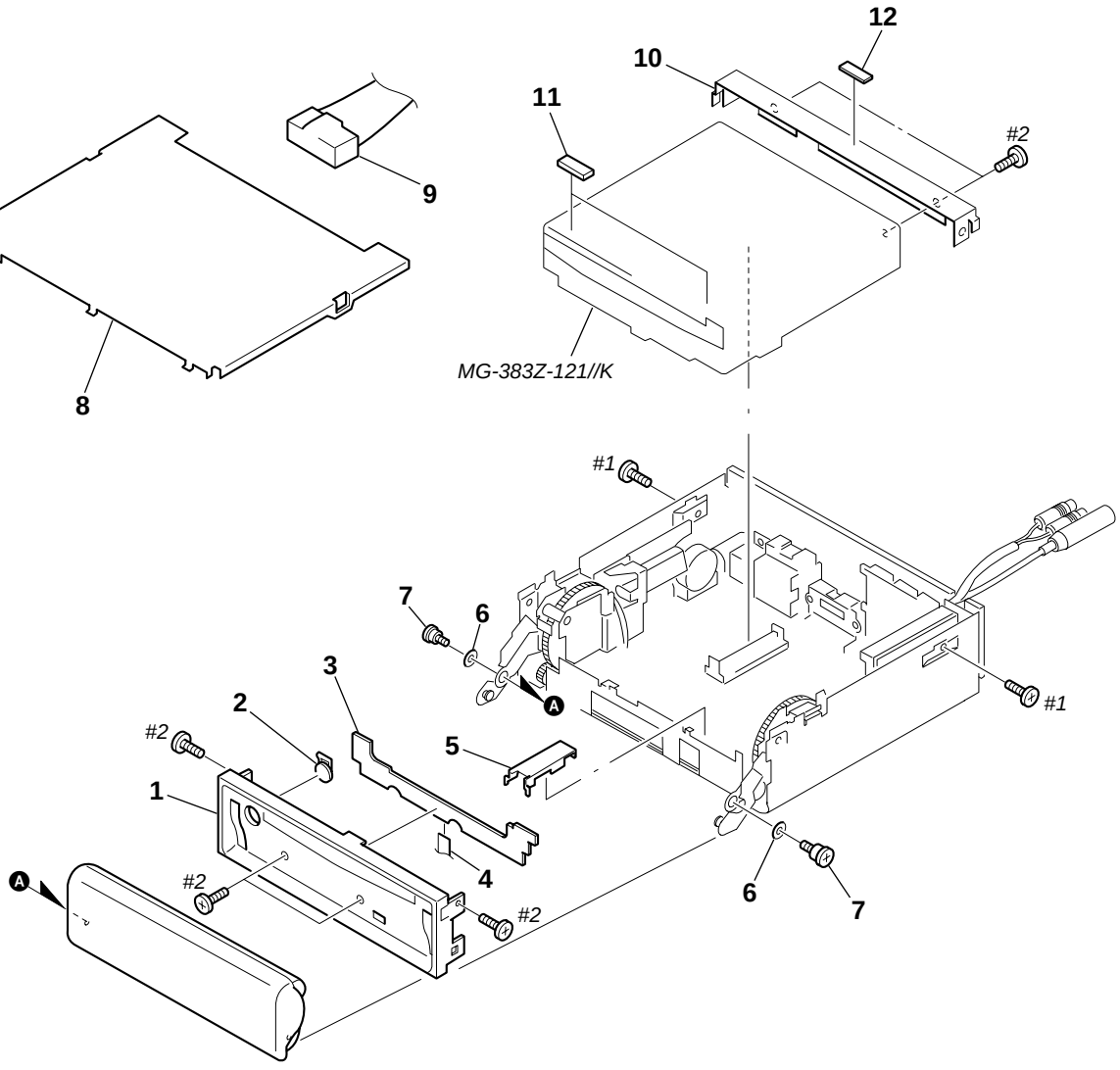


SECTION 5
EXPLODED VIEWS

NOTE:
- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Accessories and packing materials and hardware (# mark) list are given in the last of this parts list.

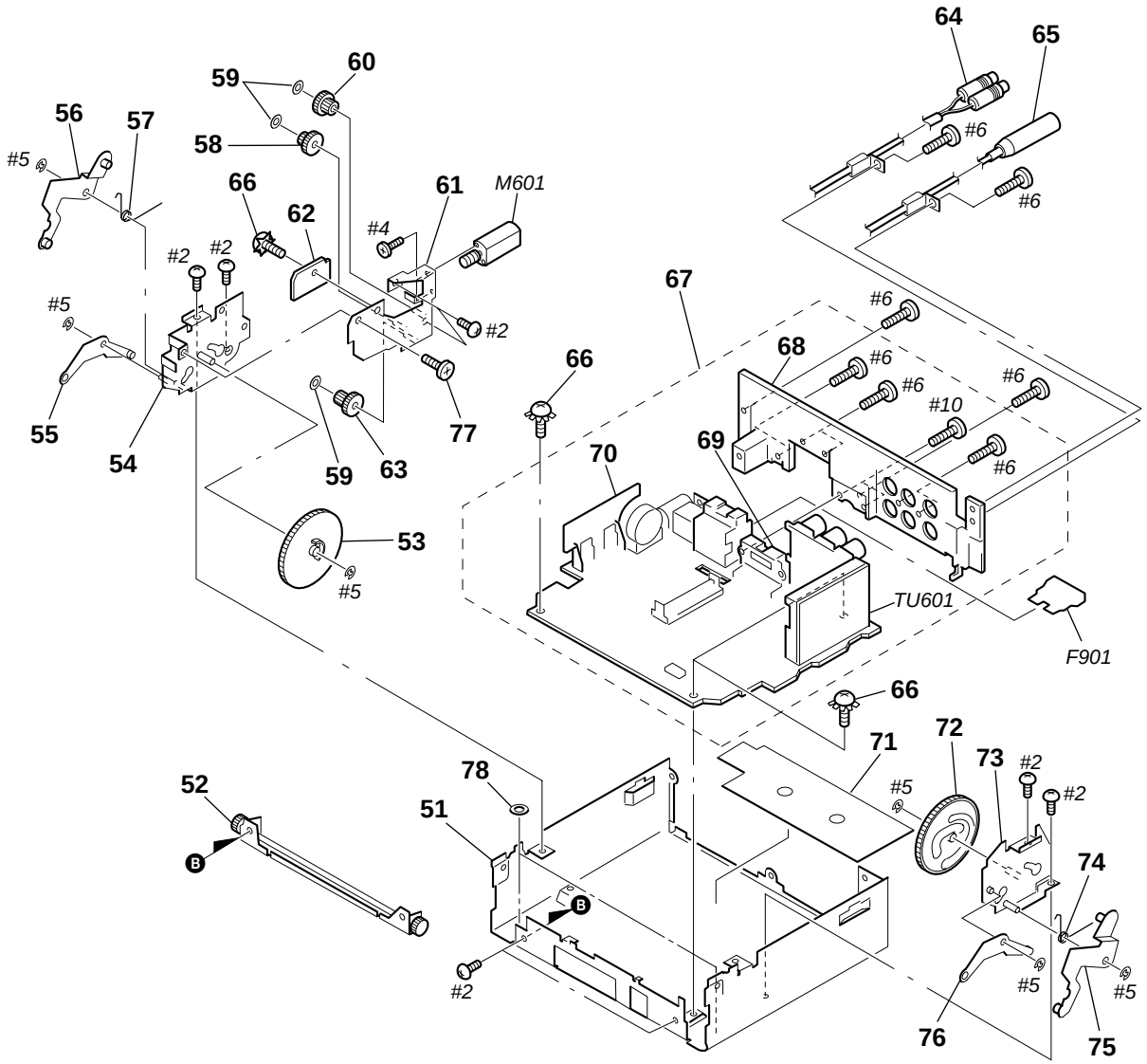
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

5-1. CHASSIS SECTION



Ref. No.	Part No.	Description	Remark
1	X-3380-111-1	PANEL (CD) SUB ASSY, SUB	
2	3-044-478-01	BUTTON (EJECT)	
* 3	1-680-703-11	SUB BOARD	
4	1-783-268-11	CABLE, FLAT 5P	
* 5	3-045-762-01	COVER (FLEXIBLE)	
6	3-049-771-01	SPACER (ARM)	
7	3-045-756-01	SCREW (PANEL)	
* 8	3-041-156-11	COVER	
9	1-776-207-72	CORD (WITH CONNECTOR) (POWER)	
* 10	3-045-743-01	BRACKET (CD)	
* 11	3-024-285-01	CUSHION (RUBBER)	
12	2-389-320-01	CUSHION, LOCK PLATE	

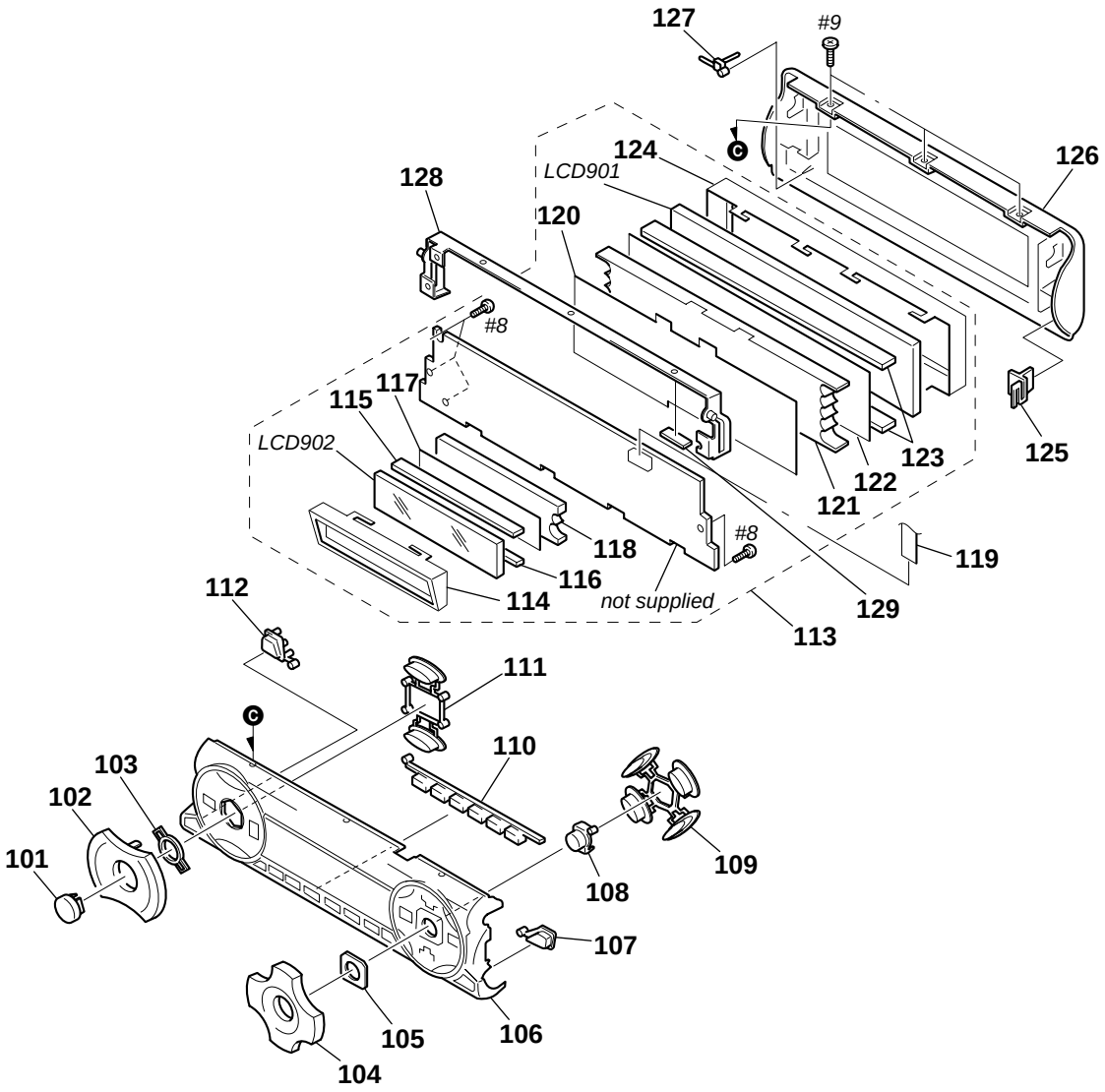
5-2. MAIN BOARD SECTION



Ref. No.	Part No.	Description	Remark
* 51	X-3380-358-1	CHASSIS (CD) ASSY	
52	A-3315-066-A	SHAFT ASSY, DRIVE	
53	3-045-722-01	CAM (L)	
* 54	X-3378-713-1	BRACKET (L) ASSY	
55	X-3378-717-1	ARM (B-L) ASSY	
56	X-3378-715-1	ARM (A-L) ASSY	
57	3-048-645-01	SPRING (ARM L)	
58	3-045-714-01	GEAR (B)	
59	3-342-940-01	WASHER (M)	
60	3-045-713-01	GEAR (A)	
* 61	X-3378-711-1	BRACKET (MOTOR) ASSY	
62	A-3326-298-A	SWITCH BOARD, COMPLETE	
63	3-045-715-01	GEAR (C)	
64	1-790-375-21	CORD (WITH CONNECTOR) (SUB OUT (MONO))	
65	1-777-246-41	CORD (WITH CONNECTOR) (ANT)	
66	3-376-464-11	SCREW (+PTT 2.6X6), GROUND POINT	

Ref. No.	Part No.	Description	Remark
* 67	A-3283-098-A	MAIN BOARD, COMPLETE	
* 68	3-044-471-01	HEAT SINK	
* 69	3-019-565-01	BRACKET (IC)	
* 70	3-045-760-01	HEAT SINK (REG)	
* 71	3-049-689-01	SHEET, INSULATING	
72	3-045-723-01	CAM (R)	
* 73	X-3378-714-1	BRACKET (R) ASSY	
74	3-048-644-01	SPRING (ARM R)	
75	X-3378-716-1	ARM (A-R) ASSY	
76	X-3378-718-1	ARM (B-R) ASSY	
77	3-922-535-11	SCREW (+BTT)	
78	3-937-107-11	WASHER (F)	
F901	1-532-877-11	FUSE (BLADE TYPE) (AUTO FUSE) 10A	
M601	X-3378-769-1	MOTOR ASSY (OPEN/CLOSE)	
TU601	A-3220-812-A	TUNER UNIT (TUX-020)	

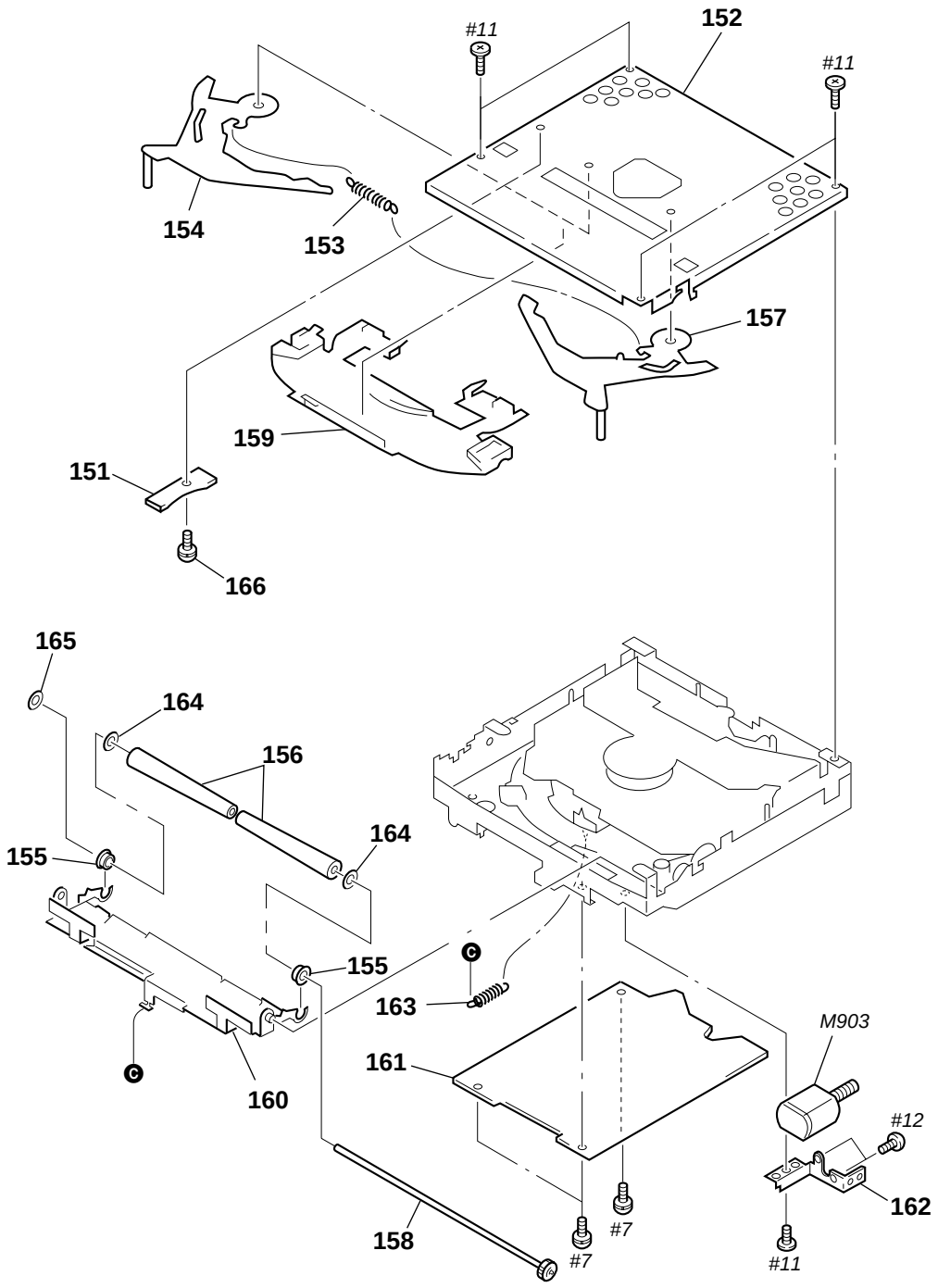
5-3. FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark
101	3-045-726-01	BUTTON (SOURCE)	
102	3-045-725-01	BUTTON (+/–)	
103	3-045-727-01	PLATE (RING), LIGHT GUIDE	
104	3-045-730-01	BUTTON (SEEK, DSO)	
105	3-045-734-01	CUSHION (SEEK)	
106	3-044-469-01	PANEL (SUB), FRONT	
107	3-045-733-01	BUTTON (CLOSE)	
108	3-045-732-01	BUTTON (D-BASS)	
109	3-045-731-01	BUTTON (ENTER)	
110	3-045-724-01	BUTTON (6 KEY)	
111	3-045-728-01	BUTTON (MODE)	
112	3-045-729-01	BUTTON (OFF)	
* 113	A-3283-099-A	DISPLAY BOARD, COMPLETE	
* 114	3-045-706-01	BRACKET (LCD) (SUB)	
115	1-694-687-11	CONDUCTIVE BOARD, CONNECTION	
116	1-694-686-11	CONDUCTIVE BOARD, CONNECTION	

Ref. No.	Part No.	Description	Remark
* 117	3-045-708-01	SHEET (SUB), DIFFUSION	
* 118	3-045-707-01	PLATE (SUB) SUB, LIGHT GUIDE	
119	1-677-340-11	FLEXIBLE BOARD	
* 120	3-045-705-01	SHEET (MAIN), REFLECTION	
* 121	3-045-703-01	PLATE (LCD) (MAIN), LIGHT GUIDE	
* 122	3-045-704-01	SHEET (MAIN), DIFFUSION	
123	1-694-685-11	CONDUCTIVE BOARD, CONNECTION	
* 124	3-045-702-01	BRACKET (LCD) (MAIN)	
125	3-045-735-01	BUTTON (OPEN)	
126	X-3378-768-1	PANEL (MAIN) ASSY, FRONT	
127	3-045-781-01	BUTTON (RESET MAIN)	
* 128	X-3378-710-1	BRACKET (PANEL) ASSY	
* 129	3-049-532-01	CUSHION (PANEL)	
LCD901	1-804-312-11	DISPLAY PANEL, LIQUID CRYSTAL	
LCD902	1-803-914-11	DISPLAY PANEL, LIQUID CRYSTAL	

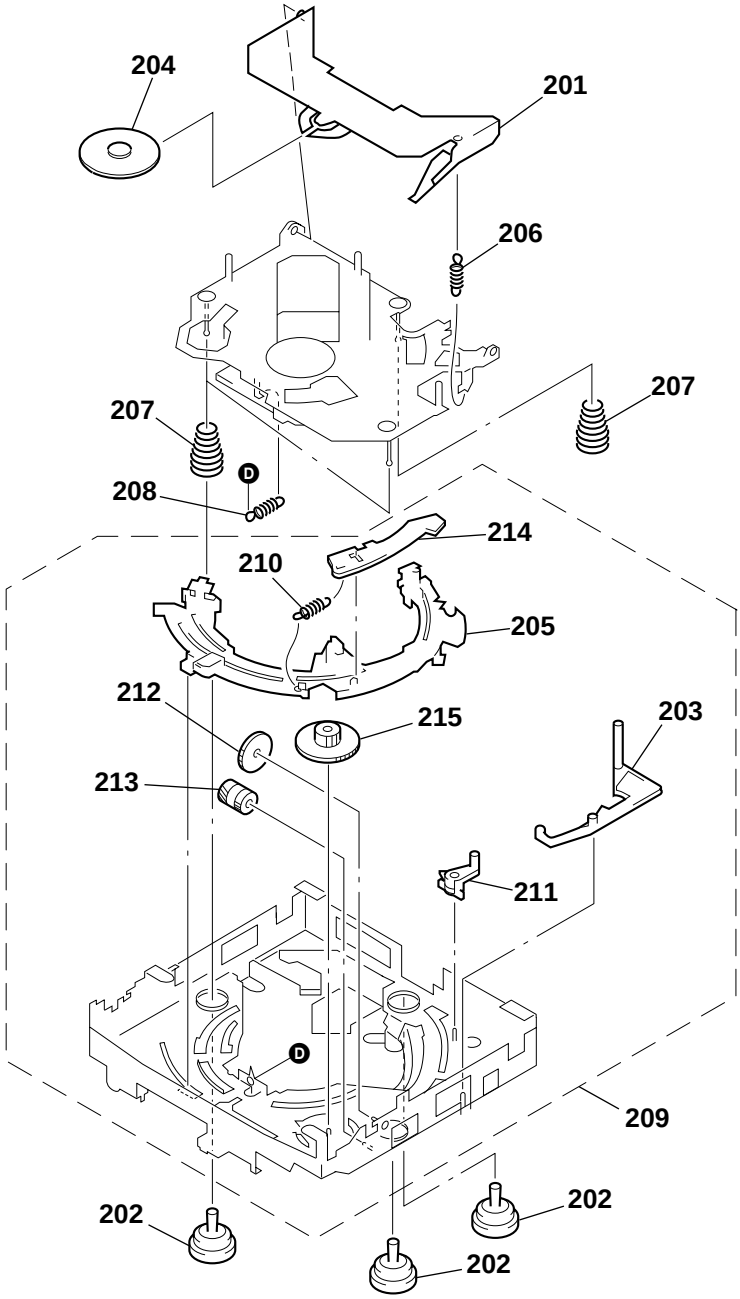
5-4. CD MECHANISM SECTION (1)
(MG-383Z-121//K)



Ref. No.	Part No.	Description	Remark
* 151	1-676-709-11	DISC IN SW BOARD	
152	3-040-039-01	CHASSIS (T)	
153	3-040-038-01	SPRING (LR), TENSION	
154	3-040-050-01	LEVER (L)	
155	3-040-022-01	RETAINER (ROLLER), SHAFT	
156	3-040-044-01	ROLLER (S)	
157	3-040-067-01	LEVER (R)	
158	A-3301-980-A	SHAFT ROLLER ASSY	
159	3-040-037-01	GUIDE (DISC)	

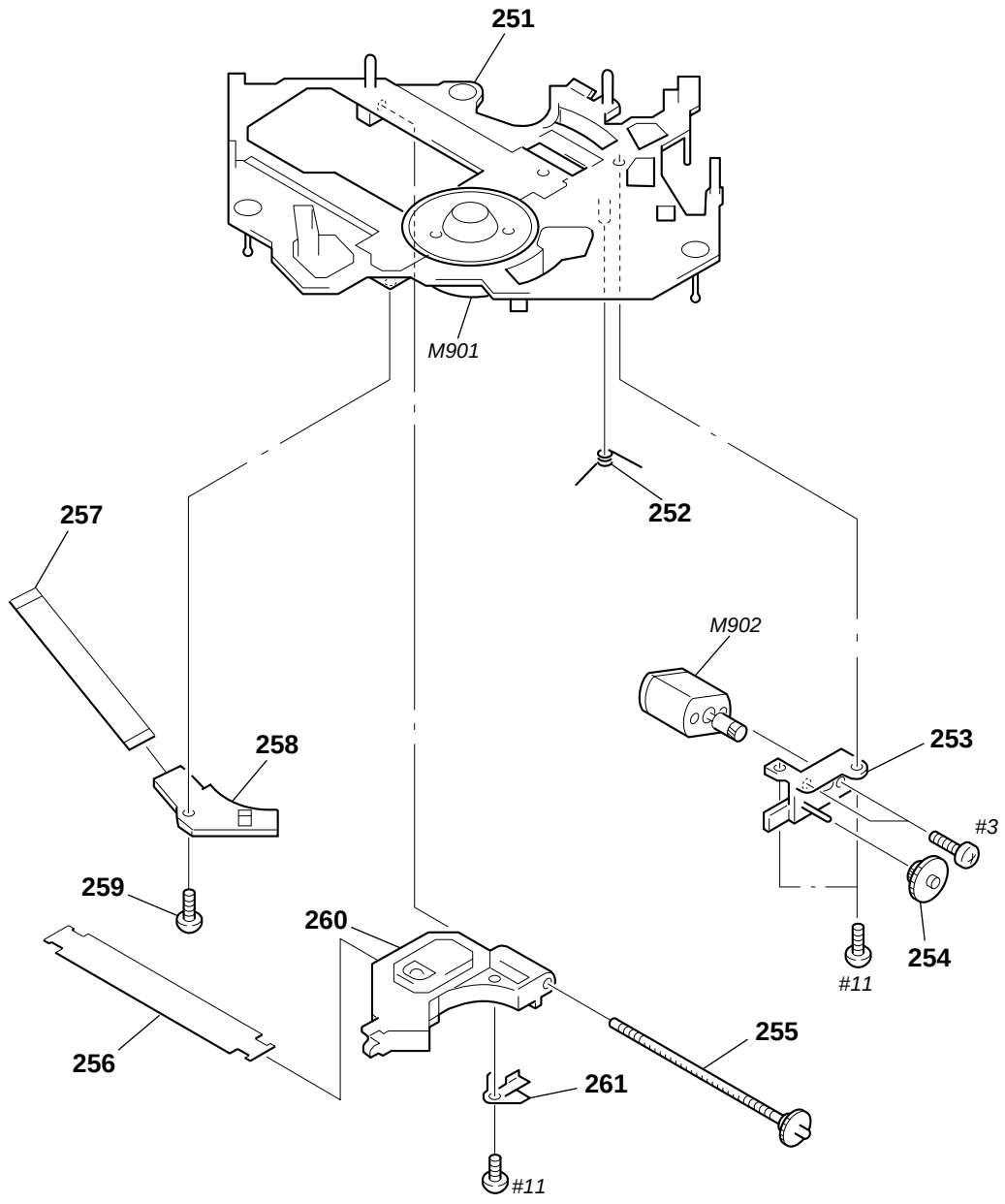
Ref. No.	Part No.	Description	Remark
160	3-040-040-01	ARM (ROLLER)	
* 161	A-3294-809-A	SERVO BOARD, COMPLETE	
162	3-221-779-01	BRACKET (MOTOR)	
163	3-040-034-01	SPRING (RA), TENSION	
164	3-040-042-01	WASHER	
165	3-043-880-01	RING (RA), RETAINING	
166	3-044-206-11	SCREW, SPECIAL	
M903	A-3315-039-A	MOTOR SUB ASSY, LO (LOADING)	

5-5. CD MECHANISM SECTION (2)
(MG-383Z-121//K)



Ref. No.	Part No.	Description	Remark
201	3-040-025-01	ARM, CHUCKING	
202	3-040-031-01	DAMPER (T)	
203	3-040-056-01	LEVER (D)	
204	3-040-024-01	RETAINER (DISC)	
205	3-040-053-01	RING, LOADING	
206	3-040-026-01	SPRING (CH), TENSION	
207	3-040-032-01	SPRING (FL), COMPRESSION	
208	3-040-033-01	SPRING (KF1), TENSION	
209	A-3307-422-A	CHASSIS (M) COMPLETE ASSY	
210	3-040-059-01	SPRING (TR), TENSION	
211	3-040-057-01	LEVER (LOCK)	
212	3-040-058-01	GEAR (MDL)	
213	3-040-052-01	WHEEL (U), WORM	
214	3-040-051-01	LEVER (TR)	
215	3-040-054-01	WHEEL (LW), WORM	

5-6. CD MECHANISM SECTION (3)
(MG-383Z-121//K)



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
* 251	X-3378-480-1	CHASSIS (OP) ASSY (INCLUDING M901)	
252	3-040-029-01	SPRING (SL), TORSION	
253	3-040-045-01	BASE (DRIVING)	
254	3-040-194-01	GEAR (MIDWAY)	
255	A-3301-983-A	SHAFT (FEED) ASSY	
256	1-676-707-11	PICK-UP FLEXIBLE BOARD	
257	1-677-182-11	MOTOR FLEXIBLE BOARD	
* 258	1-676-708-11	LIMIT SW BOARD	
259	3-909-607-01	SCREW	
⚠260	8-820-103-03	PICK-UP, OPTICAL KSS-720A/K1RP	
261	3-040-030-01	SPRING (FEED), PLATE	
M902	A-3301-985-A	MOTOR ASSY, SLED (SLED)	

DISC IN SW **DISPLAY**

SECTION 6
ELECTRICAL PARTS LIST

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL:Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F:nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u : µ, for example:
  uA.. : µA.. uPA.. : µPA..
  uPB.. : µPB.. uPC.. : µPC.. uPD.. : µPD..
- CAPACITORS
  uF : µF
- COILS
  uH : µH

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description			Remark
*	1-676-709-11	DISC IN SW BOARD			
		**********			
		< SWITCH >			
SW2	1-529-566-21	SWITCH, PUSH (1 KEY) (SELF)			
SW3	1-529-566-21	SWITCH, PUSH (1 KEY) (DISC IN)			
**********					
*	A-3283-099-A	DISPLAY BOARD, COMPLETE			
		**********			
	1-694-685-11	CONDUCTIVE BOARD, CONNECTION			
	1-694-686-11	CONDUCTIVE BOARD, CONNECTION			
	1-694-687-11	CONDUCTIVE BOARD, CONNECTION			
*	3-045-702-01	BRACKET (LCD) (MAIN)			
*	3-045-703-01	PLATE (LCD) (MAIN), LIGHT GUIDE			
*	3-045-704-01	SHEET (MAIN), DIFFUSION			
*	3-045-705-01	SHEET (MAIN), REFLECTION			
*	3-045-706-01	BRACKET (LCD) (SUB)			
*	3-045-707-01	PLATE (SUB) SUB, LIGHT GUIDE			
*	3-045-708-01	SHEET (SUB), DIFFUSION			
		< CAPACITOR >			
C901	1-164-004-11	CERAMIC CHIP	0.1uF	10% 25V	
C902	1-164-004-11	CERAMIC CHIP	0.1uF	10% 25V	
C903	1-165-176-11	CERAMIC CHIP	0.047uF	10% 16V	
C904	1-165-176-11	CERAMIC CHIP	0.047uF	10% 16V	
C905	1-165-176-11	CERAMIC CHIP	0.047uF	10% 16V	
C906	1-115-412-11	CERAMIC CHIP	680PF	5% 25V	
C907	1-164-004-11	CERAMIC CHIP	0.1uF	10% 25V	
C908	1-165-176-11	CERAMIC CHIP	0.047uF	10% 16V	
C909	1-165-176-11	CERAMIC CHIP	0.047uF	10% 16V	
C910	1-165-176-11	CERAMIC CHIP	0.047uF	10% 16V	
C911	1-115-412-11	CERAMIC CHIP	680PF	5% 25V	
C912	1-164-004-11	CERAMIC CHIP	0.1uF	10% 25V	
C913	1-164-004-11	CERAMIC CHIP	0.1uF	10% 25V	
		< CONNECTOR >			
CN901	1-794-184-11	CONNECTOR, FPC (ZIF) 14P			
		< DIODE >			
D902	8-719-422-41	DIODE MA8051-L-TX			
D903	8-719-978-33	DIODE UDZS-TE17-6.8B			
D904	8-719-978-33	DIODE UDZS-TE17-6.8B			
D905	8-719-978-33	DIODE UDZS-TE17-6.8B			
D906	8-719-978-33	DIODE UDZS-TE17-6.8B			

Ref. No.	Part No.	Description	Remark
D907	8-719-978-33	DIODE UDZS-TE17-6.8B	
D908	8-719-420-14	DIODE MA8082-M-TX	
D909	8-719-422-80	DIODE MA8075-H-TX	
D910	8-719-978-33	DIODE UDZS-TE17-6.8B	
		< IC >	
IC901	8-759-653-26	IC LC75878W	
IC902	8-759-653-26	IC LC75878W	
IC903	8-749-012-25	IC RS-170-TU	
		< LIQUID CRYSTAL DISPLAY >	
LCD901	1-804-312-11	DISPLAY PANEL, LIQUID CRYSTAL	
LCD902	1-803-914-11	DISPLAY PANEL, LIQUID CRYSTAL	
		< DIODE >	
LED901	8-719-079-49	LED NSSW450-BRS-TVR (SONY)	
LED903	8-719-076-58	LED NSSW440-BRS (LCD BACK LIGHT)	
LED904	8-719-076-58	LED NSSW440-BRS (LCD BACK LIGHT)	
LED905	8-719-079-26	LED NSSB440-WRST-THR (LCD BACK LIGHT)	
LED906	8-719-079-26	LED NSSB440-WRST-THR (LCD BACK LIGHT)	
LED907	8-719-076-58	LED NSSW440-BRS (LCD BACK LIGHT)	
LED908	8-719-076-58	LED NSSW440-BRS (LCD BACK LIGHT)	
LED911	8-719-076-58	LED NSSW440-BRS (LCD BACK LIGHT)	
LED912	8-719-076-58	LED NSSW440-BRS (LCD BACK LIGHT)	
LED913	8-719-076-58	LED NSSW440-BRS (LCD BACK LIGHT)	
LED914	8-719-076-58	LED NSSW440-BRS (LCD BACK LIGHT)	
LED915	8-719-076-58	LED NSSW440-BRS (LCD BACK LIGHT)	
LED916	8-719-076-58	LED NSSW440-BRS (LCD BACK LIGHT)	
LED917	8-719-078-39	LED CL-170SR-CD-T (RING ILLUMINATION)	
LED918	8-719-078-39	LED CL-170SR-CD-T (RING ILLUMINATION)	
LED919	8-719-078-39	LED CL-170SR-CD-T (RING ILLUMINATION)	
LED920	8-719-078-39	LED CL-170SR-CD-T (RING ILLUMINATION)	
LED921	8-719-078-39	LED CL-170SR-CD-T (MODE)	
		< SWITCH >	
LSW902	1-771-476-11	SWITCH, KEYBOARD (WITH LED) (SOUND)	
LSW903	1-771-883-11	SWITCH, TACTILE (WITH LED) (D-BASS)	
LSW904	1-771-476-11	SWITCH, KEYBOARD (WITH LED) (MENU)	
LSW905	1-771-883-11	SWITCH, TACTILE (WITH LED) (DISC +)	
LSW906	1-771-883-11	SWITCH, TACTILE (WITH LED) (⏮ ◀◀)	
LSW907	1-771-476-11	SWITCH, KEYBOARD (WITH LED) (LIST)	
LSW908	1-771-476-11	SWITCH, KEYBOARD (WITH LED) (▶▶⏭ ▶▶)	
LSW909	1-771-476-11	SWITCH, KEYBOARD (WITH LED) (ENTER)	
LSW910	1-771-883-11	SWITCH, TACTILE (WITH LED) (DISC –)	
LSW911	1-771-883-11	SWITCH, TACTILE (WITH LED) (CLOSE)	

Ref. No.	Part No.	Description			Remark
LSW912	1-771-476-11	SWITCH, KEYBOARD (WITH LED) (OPEN)			
LSW913	1-771-883-11	SWITCH, TACTILE (WITH LED) (6)			
LSW914	1-771-883-11	SWITCH, TACTILE (WITH LED) (5)			
LSW915	1-771-883-11	SWITCH, TACTILE (WITH LED) (4)			
LSW916	1-771-883-11	SWITCH, TACTILE (WITH LED) (3)			
LSW917	1-771-883-11	SWITCH, TACTILE (WITH LED) (2/SHUF)			
LSW918	1-771-883-11	SWITCH, TACTILE (WITH LED) (1/REP)			
LSW921	1-771-476-11	SWITCH, KEYBOARD (WITH LED) (+)			
LSW922	1-771-476-11	SWITCH, KEYBOARD (WITH LED) (DSPL)			
LSW923	1-771-476-11	SWITCH, KEYBOARD (WITH LED) (–)			
LSW924	1-771-883-11	SWITCH, TACTILE (WITH LED) (OFF)			
LSW925	1-771-476-11	SWITCH, KEYBOARD (WITH LED) (SOURCE)			
		< TRANSISTOR >			
Q901	8-729-900-53	TRANSISTOR DTC114EKA-T146			
Q902	8-729-106-60	TRANSISTOR 2SB1132-T101-QR			
Q903	8-729-106-60	TRANSISTOR 2SB1132-T101-QR			
Q904	8-729-900-53	TRANSISTOR DTC114EKA-T146			
Q905	8-729-904-66	TRANSISTOR DTD113EK-T146			
Q906	8-729-904-66	TRANSISTOR DTD113EK-T146			
Q910	8-729-900-53	TRANSISTOR DTC114EKA-T146			
		< RESISTOR >			
R901	1-218-879-11	RES-CHIP	22K	2%	1/16W
R902	1-218-875-11	RES-CHIP	15K	2%	1/16W
R903	1-218-871-11	RES-CHIP	10K	2%	1/16W
R904	1-218-867-11	RES-CHIP	6.8K	2%	1/16W
R905	1-218-859-11	RES-CHIP	3.3K	2%	1/16W
R906	1-218-859-11	RES-CHIP	3.3K	2%	1/16W
R907	1-218-855-11	RES-CHIP	2.2K	2%	1/16W
R908	1-218-851-11	RES-CHIP	1.5K	2%	1/16W
R909	1-218-851-11	RES-CHIP	1.5K	2%	1/16W
R910	1-218-847-11	RES-CHIP	1K	2%	1/16W
R911	1-219-286-11	RES-CHIP	680	2%	1/16W
R912	1-219-286-11	RES-CHIP	680	2%	1/16W
R913	1-219-286-11	RES-CHIP	680	2%	1/16W
R915	1-218-867-11	RES-CHIP	6.8K	2%	1/16W
R916	1-218-863-11	RES-CHIP	4.7K	2%	1/16W
R917	1-218-859-11	RES-CHIP	3.3K	2%	1/16W
R918	1-218-855-11	RES-CHIP	2.2K	2%	1/16W
R919	1-218-851-11	RES-CHIP	1.5K	2%	1/16W
R920	1-218-851-11	RES-CHIP	1.5K	2%	1/16W
R921	1-218-847-11	RES-CHIP	1K	2%	1/16W
R922	1-219-286-11	RES-CHIP	680	2%	1/16W
R923	1-219-286-11	RES-CHIP	680	2%	1/16W
R924	1-219-286-11	RES-CHIP	680	2%	1/16W
R926	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R927	1-216-833-11	METAL CHIP	10K	5%	1/16W
R928	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R929	1-216-833-11	METAL CHIP	10K	5%	1/16W
R930	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R931	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R932	1-216-037-00	METAL CHIP	330	5%	1/10W

Ref. No.	Part No.	Description			Remark
R933	1-216-033-00	METAL CHIP	220	5%	1/10W
R934	1-216-025-11	RES-CHIP	100	5%	1/10W
R935	1-216-033-00	METAL CHIP	220	5%	1/10W
R936	1-216-025-11	RES-CHIP	100	5%	1/10W
R937	1-216-033-00	METAL CHIP	220	5%	1/10W
R938	1-216-025-11	RES-CHIP	100	5%	1/10W
R940	1-216-033-00	METAL CHIP	220	5%	1/10W
R941	1-216-025-11	RES-CHIP	100	5%	1/10W
R942	1-216-025-11	RES-CHIP	100	5%	1/10W
R943	1-216-025-11	RES-CHIP	100	5%	1/10W
R945	1-216-035-00	METAL CHIP	270	5%	1/10W
R947	1-216-035-00	METAL CHIP	270	5%	1/10W
R949	1-216-029-00	METAL CHIP	150	5%	1/10W
R951	1-216-029-00	METAL CHIP	150	5%	1/10W
R953	1-216-029-00	METAL CHIP	150	5%	1/10W
R955	1-216-029-00	METAL CHIP	150	5%	1/10W
R957	1-216-029-00	METAL CHIP	150	5%	1/10W
R959	1-216-029-00	METAL CHIP	150	5%	1/10W
R961	1-216-029-00	METAL CHIP	150	5%	1/10W
R963	1-216-029-00	METAL CHIP	150	5%	1/10W
R964	1-216-811-11	METAL CHIP	150	5%	1/16W
R965	1-216-833-11	METAL CHIP	10K	5%	1/16W
R967	1-216-805-11	METAL CHIP	47	5%	1/16W
R968	1-216-821-11	METAL CHIP	1K	5%	1/16W
R969	1-216-809-11	METAL CHIP	100	5%	1/16W
R970	1-216-809-11	METAL CHIP	100	5%	1/16W
R971	1-216-809-11	METAL CHIP	100	5%	1/16W
R972	1-216-841-11	METAL CHIP	47K	5%	1/16W
R974	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R975	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R976	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R977	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R978	1-216-809-11	METAL CHIP	100	5%	1/16W
R979	1-216-809-11	METAL CHIP	100	5%	1/16W
R980	1-216-809-11	METAL CHIP	100	5%	1/16W
R981	1-216-821-11	METAL CHIP	1K	5%	1/16W
R982	1-216-841-11	METAL CHIP	47K	5%	1/16W
R984	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R985	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R986	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R987	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R988	1-216-037-00	METAL CHIP	330	5%	1/10W
R989	1-216-821-11	METAL CHIP	1K	5%	1/16W
R990	1-216-025-11	RES-CHIP	100	5%	1/10W
R991	1-216-025-11	RES-CHIP	100	5%	1/10W
		< SWITCH >			
S901	1-771-027-21	SWITCH, KEYBOARD (RESET)			
S902	1-771-884-11	SWITCH, TACTILE (MODE)			

****

LIMIT SW | MAIN

Ref. No.	Part No.	Description			Remark
*	1-676-708-11	LIMIT SW BOARD			
		**********			
		< CONNECTOR >			
CN13	1-770-347-21	CONNECTOR, FPC 6P			
		< SWITCH >			
SW4	1-529-565-41	SWITCH, PUSH (1 KEY) (LIMIT)			
**********					
*	A-3283-098-A	MAIN BOARD, COMPLETE			
		**********			
*	3-019-565-01	BRACKET (IC)			
*	3-044-471-01	HEAT SINK			
*	3-045-760-01	HEAT SINK (REG)			
	7-685-792-09	SCREW +PTT 2.6X6 (S)			
	7-685-793-09	SCREW +PTT 2.6X8 (S)			
	7-685-795-09	SCREW +PTT 2.6X12 (S)			
		< BUZZER >			
BZ801	1-504-920-11	BUZZER			
		< CAPACITOR >			
C101	1-124-233-11	ELECT	10uF	20%	16V
C102	1-124-233-11	ELECT	10uF	20%	16V
C103	1-127-715-11	CERAMIC CHIP	0.22uF	10%	16V
C104	1-127-715-11	CERAMIC CHIP	0.22uF	10%	16V
C105	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C106	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C201	1-124-233-11	ELECT	10uF	20%	16V
C202	1-124-233-11	ELECT	10uF	20%	16V
C203	1-127-715-11	CERAMIC CHIP	0.22uF	10%	16V
C204	1-127-715-11	CERAMIC CHIP	0.22uF	10%	16V
C205	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C206	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C303	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C334	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C335	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C336	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C337	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C338	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C339	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C341	1-124-589-11	ELECT	47uF	20%	16V
C342	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C353	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C363	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C370	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C373	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C375	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C376	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C377	1-124-589-11	ELECT	47uF	20%	16V
C378	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C379	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C380	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C401	1-115-156-11	CERAMIC CHIP	1uF		10V
C402	1-115-156-11	CERAMIC CHIP	1uF		10V
C404	1-124-234-00	ELECT	22uF	20%	16V
C408	1-125-891-11	CERAMIC CHIP	0.47uF	10%	10V
C409	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C410	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C411	1-124-584-00	ELECT	100uF	20%	10V
C416	1-115-156-11	CERAMIC CHIP	1uF		10V
C417	1-115-156-11	CERAMIC CHIP	1uF		10V
C428	1-115-156-11	CERAMIC CHIP	1uF		10V
C429	1-126-382-11	ELECT	100uF	20%	16V
C430	1-126-382-11	ELECT	100uF	20%	16V
C436	1-107-885-11	ELECT	3300uF	20%	16V
C437	1-124-465-00	ELECT	0.47uF	20%	50V
C438	1-124-233-11	ELECT	10uF	20%	16V
C440	1-124-248-00	ELECT	22uF	20%	25V
C461	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C462	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C465	1-124-233-11	ELECT	10uF	20%	16V
C469	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C470	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C471	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C472	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C473	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C476	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C485	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C614	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C615	1-124-234-00	ELECT	22uF	20%	16V
C628	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C632	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C633	1-162-918-11	CERAMIC CHIP	18PF	5%	50V
C634	1-216-295-11	SHORT	0		
C637	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C638	1-110-563-11	CERAMIC CHIP	0.068uF	10%	16V
C639	1-115-156-11	CERAMIC CHIP	1uF		10V
C642	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C643	1-115-156-11	CERAMIC CHIP	1uF		10V
C645	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C701	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C702	1-124-229-00	ELECT	33uF	20%	10V
C703	1-128-057-11	ELECT	330uF	20%	6.3V
C705	1-115-156-11	CERAMIC CHIP	1uF		10V
C706	1-115-156-11	CERAMIC CHIP	1uF		10V
C707	1-115-156-11	CERAMIC CHIP	1uF		10V
C801	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C802	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C803	1-164-160-11	CERAMIC CHIP	20PF	5%	50V
C804	1-162-918-11	CERAMIC CHIP	18PF	5%	50V
C806	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C807	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C808	1-115-156-11	CERAMIC CHIP	1uF		10V

Ref. No.	Part No.	Description			Remark
C809	1-115-156-11	CERAMIC CHIP	1uF		10V
C810	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C812	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C813	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
C814	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C815	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C816	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C817	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C818	1-124-119-00	ELECT	330uF	20%	16V
C819	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C820	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C821	1-162-920-11	CERAMIC CHIP	27PF	5%	50V
C822	1-162-920-11	CERAMIC CHIP	27PF	5%	50V
C823	1-126-924-11	ELECT	330uF	20%	10V
C902	1-115-156-11	CERAMIC CHIP	1uF		10V
C903	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C904	1-124-599-11	ELECT	220uF	20%	25V
C905	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C906	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C907	1-124-233-11	ELECT	10uF	20%	16V
C908	1-162-959-11	CERAMIC CHIP	330PF	5%	50V
C909	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C910	1-115-156-11	CERAMIC CHIP	1uF		10V
C911	1-164-217-11	CERAMIC CHIP	150PF	5%	50V
C912	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C913	1-126-176-11	ELECT	220uF	20%	10V
C914	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C915	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C916	1-126-176-11	ELECT	220uF	20%	10V
C917	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C918	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C919	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C920	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C921	1-110-654-11	DOUBLE LAYERS	0.047F		5.5V
C922	1-128-057-11	ELECT	330uF	20%	6.3V
C923	1-162-959-11	CERAMIC CHIP	330PF	5%	50V
C924	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C926	1-126-176-11	ELECT	220uF	20%	10V
C927	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C928	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C960	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C961	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
		< CONNECTOR >			
CNP701	1-764-617-12	PIN, CONNECTOR (PC BOARD) 30P			
CNP801	1-580-907-31	PLUG, CONNECTOR (BUS CONTROL IN)			
CNP802	1-794-185-11	CONNECTOR, FPC (ZIF) 14P			
CNP805	1-563-614-31	CONNECTOR, FLEXIBLE 11P			
CNP901	1-774-701-11	PIN, CONNECTOR 16P			
* CNP902	1-568-954-11	PIN, CONNECTOR 5P			

Ref. No.	Part No.	Description	Remark
		< JACK >	
CNP803	1-764-270-21	JACK, STEREO MINIATURE (DIA.3.5)	(REMOTE IN)
		< DIODE >	
D301	8-719-914-43	DIODE DAN202K-T-146	
D302	8-719-988-61	DIODE 1SS355TE-17	
D303	8-719-914-44	DIODE DAP202K-T-146	
D304	8-719-978-33	DIODE UDZS-TE17-6.8B	
D401	8-719-914-43	DIODE DAN202K-T-146	
D402	8-719-988-61	DIODE 1SS355TE-17	
D403	8-719-422-16	DIODE MA8039-L-TX	
D413	1-216-295-11	SHORT 0	
D414	1-216-295-11	SHORT 0	
D502	8-719-988-61	DIODE 1SS355TE-17	
D601	8-719-422-41	DIODE MA8051-L-TX	
D604	8-719-988-61	DIODE 1SS355TE-17	
D801	8-719-988-61	DIODE 1SS355TE-17	
D802	8-719-988-61	DIODE 1SS355TE-17	
D804	8-719-988-61	DIODE 1SS355TE-17	
D811	8-719-069-56	DIODE UDZS-TE17-6.2B	
D815	8-719-058-24	DIODE RB501V-40TE-17	
D825	8-719-058-24	DIODE RB501V-40TE-17	
D826	8-719-422-41	DIODE MA8051-L-TX	
D828	8-719-988-61	DIODE 1SS355TE-17	
D901	8-719-049-38	DIODE 1N5404TU	
D902	8-719-055-30	DIODE D1FS4A-TA	
D903	8-719-914-43	DIODE DAN202K-T-146	
D904	8-719-977-03	DIODE MA8056-H-TX	
D905	8-719-988-61	DIODE 1SS355TE-17	
D906	8-719-053-18	DIODE 1SR154-400TE-25	
D909	8-719-988-61	DIODE 1SS355TE-17	
D910	8-719-978-33	DIODE UDZS-TE17-6.8B	
D912	8-719-914-43	DIODE DAN202K-T-146	
D913	8-719-914-44	DIODE DAP202K-T-146	
D914	8-719-058-24	DIODE RB501V-40TE-17	
D915	8-719-978-33	DIODE UDZS-TE17-6.8B	
D916	8-719-055-30	DIODE D1FS4A-TA	
D917	8-719-056-93	DIODE UDZ-TE-17-18B	
D918	8-719-069-56	DIODE UDZS-TE17-6.2B	
D919	8-719-053-18	DIODE 1SR154-400TE-25	
D920	1-216-295-11	SHORT 0	
D921	8-719-914-44	DIODE DAP202K-T-146	
D922	8-719-988-61	DIODE 1SS355TE-17	
D923	8-719-988-61	DIODE 1SS355TE-17	
D924	8-719-914-43	DIODE DAN202K-T-146	
		< FERRITE BEAD >	
FB801	1-414-235-22	INDUCTOR, FERRITE BEAD	

MAIN

Ref. No.	Part No.	Description	Remark
		< IC >	
IC301	8-759-684-69	IC HD6432355A26F	
IC303	8-759-277-63	IC TC7W14FU(TE12R)	
IC306	8-759-668-14	IC PQ09DZ1U	
IC307	8-759-580-33	IC BA6288FS-E2	
IC308	8-759-701-01	IC NJM2904M(TE2)	
IC401	8-759-653-27	IC TDA7402TR	
IC407	8-759-392-22	IC BA3834F	
IC409	8-759-909-71	IC BA4558F-E2	
IC801	8-759-668-85	IC MB90574BPMT-G-260-BND	
IC802	8-759-449-89	IC BA8270F-E2	
IC901	8-759-990-43	IC TL1451ACDB-E20	
IC902	8-759-828-22	IC XC61CN4102MR	
IC903	8-759-827-14	IC TA8268AH	
IC905	8-759-540-27	IC TA78DL06AS	
		< JUMPER RESISTOR >	
JR305	1-216-295-11	SHORT 0	
JR412	1-216-864-11	SHORT 0	
JR601	1-216-864-11	SHORT 0	
JR602	1-216-864-11	SHORT 0	
JR604	8-719-058-24	DIODE RB501V-40TE-17	
JR605	1-216-295-11	SHORT 0	
JR608	1-216-864-11	SHORT 0	
JR801	1-216-295-11	SHORT 0	
JR802	1-216-295-11	SHORT 0	
JR901	1-216-295-11	SHORT 0	
JR902	1-216-295-11	SHORT 0	
JR904	1-216-864-11	SHORT 0	
JR905	1-216-295-11	SHORT 0	
JR906	1-216-295-11	SHORT 0	
JR908	1-216-295-11	SHORT 0	
JR914	1-216-295-11	SHORT 0	
		< COIL >	
L703	1-216-304-11	METAL CHIP 3.3 5% 1/10W	
L704	1-216-017-11	RES-CHIP 47 5% 1/10W	
L901	1-419-476-31	COIL, CHOKE 250uH	
L902	1-419-537-11	COIL, CHOKE 300uH	
L903	1-419-537-11	COIL, CHOKE 300uH	
L904	1-412-054-21	INDUCTOR 2.2uH	
L905	1-412-054-21	INDUCTOR 2.2uH	
		< JACK >	
PJ401	1-774-700-11	JACK, PIN 6P (BUS AUDIO IN, AUDIO OUT REAR/FRONT)	
		< CONNECTOR >	
* PJ402	1-506-985-11	PIN, CONNECTOR (PC BOARD) 3P	
* PJ403	1-506-984-11	PIN, CONNECTOR (PC BOARD) 2P	

Ref. No.	Part No.	Description	Remark
		< TRANSISTOR >	
Q101	8-729-920-31	TRANSISTOR DTC343TK-T-146	
Q102	8-729-920-31	TRANSISTOR DTC343TK-T-146	
Q201	8-729-920-31	TRANSISTOR DTC343TK-T-146	
Q202	8-729-920-31	TRANSISTOR DTC343TK-T-146	
Q302	8-729-038-68	TRANSISTOR KRC103S	
Q303	8-729-216-22	TRANSISTOR 2SA1037K-T-146-S	
Q304	8-729-120-28	TRANSISTOR 2SC2412K-T-146-R	
Q401	8-729-038-55	TRANSISTOR KRA103S	
Q402	8-729-028-66	TRANSISTOR DTC115EKA-T146	
Q403	8-729-920-21	TRANSISTOR DTC314TK-T-146	
Q404	8-729-920-21	TRANSISTOR DTC314TK-T-146	
Q410	8-729-038-68	TRANSISTOR KRC103S	
Q461	8-729-049-13	TRANSISTOR UPA1853GR-9JG-E1	
Q603	8-729-920-85	TRANSISTOR 2SD1664-T100-QR	
Q803	8-729-038-67	TRANSISTOR KRC102S	
Q804	8-729-038-55	TRANSISTOR KRA103S	
Q805	8-729-120-28	TRANSISTOR 2SC2412K-T-146-R	
Q806	8-729-120-28	TRANSISTOR 2SC2412K-T-146-R	
Q901	8-729-038-68	TRANSISTOR KRC103S	
Q902	8-729-120-28	TRANSISTOR 2SC2412K-T-146-R	
Q903	8-729-038-68	TRANSISTOR KRC103S	
Q904	8-729-038-55	TRANSISTOR KRA103S	
Q905	8-729-038-68	TRANSISTOR KRC103S	
Q906	8-729-820-46	TRANSISTOR 2SB1202FAST-TL	
Q907	8-729-038-68	TRANSISTOR KRC103S	
Q908	8-729-106-60	TRANSISTOR 2SB1132-T100-R	
Q909	1-801-806-11	TRANSISTOR DTC144EK-T146	
Q911	8-729-820-46	TRANSISTOR 2SB1202FAST-TL	
Q912	8-729-038-68	TRANSISTOR KRC103S	
Q913	8-729-038-55	TRANSISTOR KRA103S	
Q914	8-729-019-00	TRANSISTOR 2SD2394-G	
Q915	8-729-038-68	TRANSISTOR KRC103S	
Q916	8-729-106-60	TRANSISTOR 2SB1132-T100-R	
Q917	8-729-038-68	TRANSISTOR KRC103S	
Q918	8-729-120-28	TRANSISTOR 2SC2412K-T-146-R	
Q919	8-729-106-60	TRANSISTOR 2SB1132-T100-R	
Q920	8-729-038-68	TRANSISTOR KRC103S	
Q921	8-729-038-55	TRANSISTOR KRA103S	
Q923	8-729-120-28	TRANSISTOR 2SC2412K-T-146-R	
Q924	8-729-038-68	TRANSISTOR KRC103S	
Q925	8-729-106-60	TRANSISTOR 2SB1132-T100-R	
		< RESISTOR >	
R101	1-216-837-11	METAL CHIP 22K 5% 1/16W	
R102	1-216-837-11	METAL CHIP 22K 5% 1/16W	
R103	1-216-813-11	METAL CHIP 220 5% 1/16W	
R104	1-216-813-11	METAL CHIP 220 5% 1/16W	
R105	1-216-864-11	SHORT 0	
R106	1-216-864-11	SHORT 0	
R201	1-216-837-11	METAL CHIP 22K 5% 1/16W	
R202	1-216-837-11	METAL CHIP 22K 5% 1/16W	

Ref. No.	Part No.	Description			Remark
R203	1-216-813-11	METAL CHIP	220	5%	1/16W
R204	1-216-813-11	METAL CHIP	220	5%	1/16W
R205	1-216-864-11	SHORT	0		
R206	1-216-864-11	SHORT	0		
R314	1-216-821-11	METAL CHIP	1K	5%	1/16W
R332	1-216-809-11	METAL CHIP	100	5%	1/16W
R333	1-216-809-11	METAL CHIP	100	5%	1/16W
R334	1-216-097-11	RES-CHIP	100K	5%	1/10W
R335	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R336	1-216-836-11	METAL CHIP	18K	5%	1/16W
R337	1-216-073-00	METAL CHIP	10K	5%	1/10W
R338	1-216-837-11	METAL CHIP	22K	5%	1/16W
R339	1-216-085-00	METAL CHIP	33K	5%	1/10W
R340	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R341	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R342	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R352	1-216-845-11	METAL CHIP	100K	5%	1/16W
R364	1-414-235-22	INDUCTOR, FERRITE BEAD			
R366	1-216-845-11	METAL CHIP	100K	5%	1/16W
R371	1-216-845-11	METAL CHIP	100K	5%	1/16W
R372	1-216-845-11	METAL CHIP	100K	5%	1/16W
R373	1-216-845-11	METAL CHIP	100K	5%	1/16W
R374	1-216-845-11	METAL CHIP	100K	5%	1/16W
R375	1-216-845-11	METAL CHIP	100K	5%	1/16W
R376	1-216-025-11	RES-CHIP	100	5%	1/10W
R377	1-414-235-22	INDUCTOR, FERRITE BEAD			
R378	1-216-809-11	METAL CHIP	100	5%	1/16W
R379	1-216-809-11	METAL CHIP	100	5%	1/16W
R380	1-216-815-11	METAL CHIP	330	5%	1/16W
R381	1-216-809-11	METAL CHIP	100	5%	1/16W
R384	1-216-845-11	METAL CHIP	100K	5%	1/16W
R385	1-216-845-11	METAL CHIP	100K	5%	1/16W
R401	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R402	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R403	1-216-841-11	METAL CHIP	47K	5%	1/16W
R404	1-216-025-11	RES-CHIP	100	5%	1/10W
R405	1-216-025-11	RES-CHIP	100	5%	1/10W
R407	1-216-789-11	METAL CHIP	2.2	5%	1/16W
R414	1-216-845-11	METAL CHIP	100K	5%	1/16W
R418	1-216-841-11	METAL CHIP	47K	5%	1/16W
R440	1-216-821-11	METAL CHIP	1K	5%	1/16W
R441	1-216-049-11	RES-CHIP	1K	5%	1/10W
R442	1-216-845-11	METAL CHIP	100K	5%	1/16W
R444	1-216-841-11	METAL CHIP	47K	5%	1/16W
R445	1-216-845-11	METAL CHIP	100K	5%	1/16W
R446	1-216-821-11	METAL CHIP	1K	5%	1/16W
R447	1-216-821-11	METAL CHIP	1K	5%	1/16W
R448	1-216-033-00	METAL CHIP	220	5%	1/10W
R449	1-216-837-11	METAL CHIP	22K	5%	1/16W
R450	1-216-839-11	METAL CHIP	33K	5%	1/16W
R452	1-216-864-11	SHORT	0		
R453	1-216-837-11	METAL CHIP	22K	5%	1/16W
R454	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R457	1-216-841-11	METAL CHIP	47K	5%	1/16W
R458	1-216-839-11	METAL CHIP	33K	5%	1/16W
R465	1-216-839-11	METAL CHIP	33K	5%	1/16W
R466	1-115-156-11	CERAMIC CHIP	1uF		10V
R470	1-216-839-11	METAL CHIP	33K	5%	1/16W
R471	1-115-156-11	CERAMIC CHIP	1uF		10V
R610	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R611	1-216-839-11	METAL CHIP	33K	5%	1/16W
R612	1-216-864-11	SHORT	0		
R613	1-216-841-11	METAL CHIP	47K	5%	1/16W
R614	1-216-041-00	METAL CHIP	470	5%	1/10W
R621	1-216-864-11	SHORT	0		
R622	1-216-809-11	METAL CHIP	100	5%	1/16W
R623	1-216-809-11	METAL CHIP	100	5%	1/16W
R801	1-216-845-11	METAL CHIP	100K	5%	1/16W
R802	1-216-845-11	METAL CHIP	100K	5%	1/16W
R804	1-216-809-11	METAL CHIP	100	5%	1/16W
R805	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R807	1-216-845-11	METAL CHIP	100K	5%	1/16W
R808	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R809	1-216-813-11	METAL CHIP	220	5%	1/16W
R810	1-216-813-11	METAL CHIP	220	5%	1/16W
R811	1-216-813-11	METAL CHIP	220	5%	1/16W
R812	1-216-864-11	SHORT	0		
R813	1-216-845-11	METAL CHIP	100K	5%	1/16W
R814	1-216-809-11	METAL CHIP	100	5%	1/16W
R815	1-216-809-11	METAL CHIP	100	5%	1/16W
R816	1-216-809-11	METAL CHIP	100	5%	1/16W
R817	1-216-809-11	METAL CHIP	100	5%	1/16W
R818	1-216-864-11	SHORT	0		
R819	1-216-809-11	METAL CHIP	100	5%	1/16W
R820	1-216-809-11	METAL CHIP	100	5%	1/16W
R821	1-216-809-11	METAL CHIP	100	5%	1/16W
R823	1-216-081-00	METAL CHIP	22K	5%	1/10W
R824	1-216-025-11	RES-CHIP	100	5%	1/10W
R825	1-216-809-11	METAL CHIP	100	5%	1/16W
R826	1-216-809-11	METAL CHIP	100	5%	1/16W
R827	1-216-845-11	METAL CHIP	100K	5%	1/16W
R828	1-216-845-11	METAL CHIP	100K	5%	1/16W
R829	1-216-841-11	METAL CHIP	47K	5%	1/16W
R830	1-216-845-11	METAL CHIP	100K	5%	1/16W
R831	1-216-841-11	METAL CHIP	47K	5%	1/16W
R832	1-216-809-11	METAL CHIP	100	5%	1/16W
R833	1-216-821-11	METAL CHIP	1K	5%	1/16W
R834	1-208-806-11	RES-CHIP	10K	1%	1/10W
R835	1-208-806-11	RES-CHIP	10K	1%	1/10W
R837	1-216-079-00	METAL CHIP	18K	5%	1/10W
R838	1-216-809-11	METAL CHIP	100	5%	1/16W
R840	1-216-845-11	METAL CHIP	100K	5%	1/16W
R841	1-208-806-11	RES-CHIP	10K	1%	1/10W
R842	1-216-809-11	METAL CHIP	100	5%	1/16W
R843	1-216-821-11	METAL CHIP	1K	5%	1/16W
R844	1-216-821-11	METAL CHIP	1K	5%	1/16W

MAIN **SERVO**

Ref. No.	Part No.	Description			Remark
R845	1-216-821-11	METAL CHIP	1K	5%	1/16W
R846	1-216-821-11	METAL CHIP	1K	5%	1/16W
R847	1-216-821-11	METAL CHIP	1K	5%	1/16W
R848	1-216-809-11	METAL CHIP	100	5%	1/16W
R850	1-216-833-11	METAL CHIP	10K	5%	1/16W
R851	1-216-833-11	METAL CHIP	10K	5%	1/16W
R852	1-216-821-11	METAL CHIP	1K	5%	1/16W
R854	1-216-864-11	SHORT	0		
R855	1-216-049-11	RES-CHIP	1K	5%	1/10W
R856	1-216-815-11	METAL CHIP	330	5%	1/16W
R857	1-216-845-11	METAL CHIP	100K	5%	1/16W
R860	1-216-845-11	METAL CHIP	100K	5%	1/16W
R862	1-216-845-11	METAL CHIP	100K	5%	1/16W
R863	1-216-845-11	METAL CHIP	100K	5%	1/16W
R865	1-216-845-11	METAL CHIP	100K	5%	1/16W
R866	1-216-821-11	METAL CHIP	1K	5%	1/16W
R868	1-216-853-11	METAL CHIP	470	5%	1/16W
R901	1-216-835-11	METAL CHIP	15K	5%	1/16W
R902	1-216-835-11	METAL CHIP	15K	5%	1/16W
R903	1-216-834-11	METAL CHIP	12K	5%	1/16W
R904	1-216-841-11	METAL CHIP	47K	5%	1/16W
R905	1-216-841-11	METAL CHIP	47K	5%	1/16W
R906	1-216-841-11	METAL CHIP	47K	5%	1/16W
R907	1-216-841-11	METAL CHIP	47K	5%	1/16W
R908	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R909	1-216-809-11	METAL CHIP	100	5%	1/16W
R910	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R911	1-218-155-11	RES-CHIP	3.9K	1%	1/10W
R912	1-216-737-11	RES-CHIP	1K	1%	1/10W
R913	1-216-833-11	METAL CHIP	10K	5%	1/16W
R914	1-216-833-11	METAL CHIP	10K	5%	1/16W
R915	1-216-833-11	METAL CHIP	10K	5%	1/16W
R916	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R917	1-216-845-11	METAL CHIP	100K	5%	1/16W
R918	1-216-845-11	METAL CHIP	100K	5%	1/16W
R919	1-216-833-11	METAL CHIP	10K	5%	1/16W
R920	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R921	1-216-821-11	METAL CHIP	1K	5%	1/16W
R922	1-216-837-11	METAL CHIP	22K	5%	1/16W
R923	1-216-821-11	METAL CHIP	1K	5%	1/16W
R924	1-216-821-11	METAL CHIP	1K	5%	1/16W
R925	1-216-839-11	METAL CHIP	33K	5%	1/16W
R926	1-216-833-11	METAL CHIP	10K	5%	1/16W
R927	1-216-833-11	METAL CHIP	10K	5%	1/16W
R928	1-216-845-11	METAL CHIP	100K	5%	1/16W
R929	1-216-837-11	METAL CHIP	22K	5%	1/16W
R930	1-216-065-11	RES-CHIP	4.7K	5%	1/10W
R931	1-216-845-11	METAL CHIP	100K	5%	1/16W
R932	1-216-841-11	METAL CHIP	47K	5%	1/16W
R933	1-216-837-11	METAL CHIP	22K	5%	1/16W
R934	1-216-841-11	METAL CHIP	47K	5%	1/16W
R935	1-216-833-11	METAL CHIP	10K	5%	1/16W
R936	1-216-846-11	METAL CHIP	120K	5%	1/16W
R937	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R938	1-216-097-11	RES-CHIP	100K	5%	1/10W
R939	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R940	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R943	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R944	1-216-809-11	METAL CHIP	100	5%	1/16W
R945	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R946	1-216-737-11	RES-CHIP	1K	1%	1/10W
R947	1-216-670-11	METAL CHIP	6.2K	0.5%	1/10W
R948	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R949	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R950	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R951	1-216-097-11	RES-CHIP	100K	5%	1/10W
R952	1-216-809-11	METAL CHIP	100	5%	1/16W
R953	1-216-097-11	RES-CHIP	100K	5%	1/10W
R954	1-216-097-11	RES-CHIP	100K	5%	1/10W
R955	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R956	1-216-809-11	METAL CHIP	100	5%	1/16W
R960	1-216-809-11	METAL CHIP	100	5%	1/16W
R961	1-216-809-11	METAL CHIP	100	5%	1/16W
		< THERMISTOR (POSITIVE) >			
TH801	1-801-792-21	THERMISTOR, POSITIVE			
TH802	1-810-940-11	THERMISTOR, POSITIVE			
TH803	1-810-940-11	THERMISTOR, POSITIVE			
		< TUNER >			
TU601	A-3220-812-A	TUNER UNIT (TUX-020)			
		< VIBRATOR >			
X351	1-781-822-21	VIBRATOR, CERAMIC (18.45MHz)			
X801	1-767-993-41	VIBRATOR, CRYSTAL (3.68MHz)			
X802	1-567-098-41	VIBRATOR, CRYSTAL (32kHz)			
**********					
*	A-3294-809-A	SERVO BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C101	1-117-920-11	TANTAL. CHIP	10uF	20%	6.3V
C103	1-104-609-11	ELECT CHIP	100uF	20%	4V
C104	1-117-920-11	TANTAL. CHIP	10uF	20%	6.3V
C106	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C107	1-115-156-11	CERAMIC CHIP	1uF		10V
C108	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C109	1-162-917-11	CERAMIC CHIP	15PF	5%	50V
C115	1-164-733-11	CERAMIC CHIP	820PF	10%	50V
C116	1-165-128-11	CERAMIC CHIP	0.22uF		16V
C117	1-162-963-11	CERAMIC CHIP	680PF	10%	50V
C118	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C127	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C301	1-126-393-11	ELECT CHIP	33uF	20%	10V
C302	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C303	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V

Ref. No.	Part No.	Description			Remark
C304	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C305	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C306	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C307	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C308	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C309	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C310	1-125-838-11	CERAMIC CHIP	2.2uF	10%	6.3V
C311	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
C502	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C504	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V
C505	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C506	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C507	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C508	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
C509	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C510	1-164-217-11	CERAMIC CHIP	150PF	5%	50V
C511	1-164-217-11	CERAMIC CHIP	150PF	5%	50V
C512	1-162-963-11	CERAMIC CHIP	680PF	10%	50V
C513	1-162-963-11	CERAMIC CHIP	680PF	10%	50V
C515	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C516	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C517	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C518	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C519	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C520	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C521	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C522	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C550	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C553	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C554	1-164-360-11	CERAMIC CHIP	0.1uF		16V
		< CONNECTOR >			
CN1	1-764-616-12	HOUSING, CONNECTOR (PC BOARD) 30P			
CN2	1-794-153-21	CONNECTOR, FPC (ZIF) 16P			
CN3	1-770-347-21	CONNECTOR, FPC 6P			
		< FERRITE BEAD >			
FB101	1-500-245-11	INDUCTOR, FERRITE BEAD			
FB102	1-500-245-11	INDUCTOR, FERRITE BEAD			
FB103	1-216-295-11	SHORT	0		
FB501	1-216-295-11	SHORT	0		
FB503	1-500-445-21	INDUCTOR, FERRITE BEAD			
		< IC >			
IC1	8-752-095-36	IC CXA2596M-T6			
IC5	8-752-914-87	IC CXP84640-072Q			
IC7	8-759-832-99	IC LA6576L-TE-L			
IC501	8-752-392-04	IC CXD2598Q			
		< JUMPER RESISTOR >			
JR501	1-216-295-11	SHORT	0		
JR505	1-216-864-11	SHORT	0		
JR506	1-216-864-11	SHORT	0		
JR507	1-216-295-11	SHORT	0		

Ref. No.	Part No.	Description			Remark
		< TRANSISTOR >			
Q101	8-729-904-87	TRANSISTOR 2SB1197K-T-146-R			
		< RESISTOR >			
R101	1-216-847-11	METAL CHIP	150K	5%	1/16W
R102	1-216-847-11	METAL CHIP	150K	5%	1/16W
R103	1-216-150-11	RES-CHIP	10	5%	1/8W
R104	1-216-857-11	METAL CHIP	1M	5%	1/16W
R105	1-216-833-11	METAL CHIP	10K	5%	1/16W
R106	1-216-857-11	METAL CHIP	1M	5%	1/16W
R107	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R108	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R110	1-216-837-11	METAL CHIP	22K	5%	1/16W
R111	1-216-833-11	METAL CHIP	10K	5%	1/16W
R113	1-216-839-11	METAL CHIP	33K	5%	1/16W
R116	1-216-845-11	METAL CHIP	100K	5%	1/16W
R122	1-216-845-11	METAL CHIP	100K	5%	1/16W
R123	1-216-839-11	METAL CHIP	33K	5%	1/16W
R127	1-216-821-11	METAL CHIP	1K	5%	1/16W
R213	1-216-821-11	METAL CHIP	1K	5%	1/16W
R301	1-216-839-11	METAL CHIP	33K	5%	1/16W
R302	1-216-839-11	METAL CHIP	33K	5%	1/16W
R303	1-216-821-11	METAL CHIP	1K	5%	1/16W
R304	1-216-839-11	METAL CHIP	33K	5%	1/16W
R306	1-216-833-11	METAL CHIP	10K	5%	1/16W
R307	1-216-833-11	METAL CHIP	10K	5%	1/16W
R308	1-216-833-11	METAL CHIP	10K	5%	1/16W
R309	1-216-833-11	METAL CHIP	10K	5%	1/16W
R310	1-216-833-11	METAL CHIP	10K	5%	1/16W
R311	1-216-833-11	METAL CHIP	10K	5%	1/16W
R312	1-216-845-11	METAL CHIP	100K	5%	1/16W
R313	1-216-842-11	METAL CHIP	56K	5%	1/16W
R314	1-216-842-11	METAL CHIP	56K	5%	1/16W
R315	1-216-842-11	METAL CHIP	56K	5%	1/16W
R316	1-216-842-11	METAL CHIP	56K	5%	1/16W
R317	1-216-838-11	METAL CHIP	27K	5%	1/16W
R318	1-216-842-11	METAL CHIP	56K	5%	1/16W
R319	1-216-842-11	METAL CHIP	56K	5%	1/16W
R320	1-216-833-11	METAL CHIP	10K	5%	1/16W
R321	1-216-846-11	METAL CHIP	120K	5%	1/16W
R322	1-216-835-11	METAL CHIP	15K	5%	1/16W
R501	1-216-833-11	METAL CHIP	10K	5%	1/16W
R503	1-216-845-11	METAL CHIP	100K	5%	1/16W
R504	1-216-857-11	METAL CHIP	1M	5%	1/16W
R505	1-216-839-11	METAL CHIP	33K	5%	1/16W
R506	1-216-845-11	METAL CHIP	100K	5%	1/16W
R507	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R511	1-216-845-11	METAL CHIP	100K	5%	1/16W
R513	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R516	1-216-845-11	METAL CHIP	100K	5%	1/16W
R517	1-216-837-11	METAL CHIP	22K	5%	1/16W
R518	1-216-834-11	METAL CHIP	12K	5%	1/16W

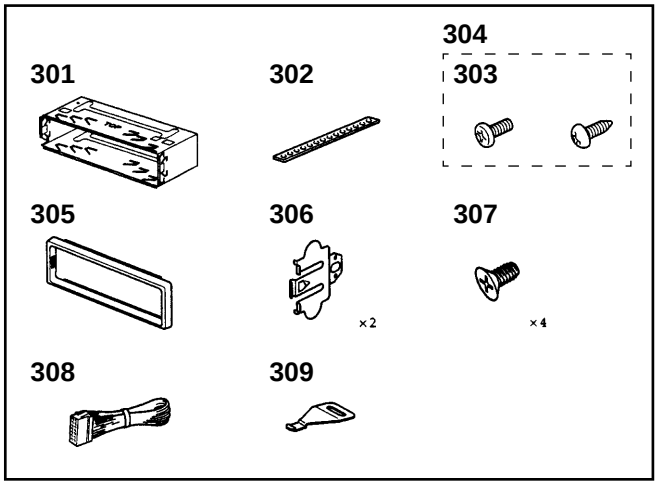
SERVO **SUB** **SWITCH**

Ref. No.	Part No.	Description			Remark
R519	1-216-834-11	METAL CHIP	12K	5%	1/16W
R520	1-216-834-11	METAL CHIP	12K	5%	1/16W
R521	1-216-834-11	METAL CHIP	12K	5%	1/16W
R522	1-216-834-11	METAL CHIP	12K	5%	1/16W
R523	1-216-834-11	METAL CHIP	12K	5%	1/16W
R524	1-216-845-11	METAL CHIP	100K	5%	1/16W
R526	1-216-845-11	METAL CHIP	100K	5%	1/16W
R527	1-216-845-11	METAL CHIP	100K	5%	1/16W
R531	1-216-809-11	METAL CHIP	100	5%	1/16W
R532	1-216-845-11	METAL CHIP	100K	5%	1/16W
R533	1-216-845-11	METAL CHIP	100K	5%	1/16W
R535	1-216-845-11	METAL CHIP	100K	5%	1/16W
R551	1-216-841-11	METAL CHIP	47K	5%	1/16W
R552	1-216-841-11	METAL CHIP	47K	5%	1/16W
R553	1-216-845-11	METAL CHIP	100K	5%	1/16W
R554	1-216-845-11	METAL CHIP	100K	5%	1/16W
R555	1-216-845-11	METAL CHIP	100K	5%	1/16W
R558	1-216-864-11	SHORT	0		
R560	1-216-809-11	METAL CHIP	100	5%	1/16W
R563	1-216-809-11	METAL CHIP	100	5%	1/16W
R564	1-216-845-11	METAL CHIP	100K	5%	1/16W
R568	1-216-837-11	METAL CHIP	22K	5%	1/16W
R569	1-216-809-11	METAL CHIP	100	5%	1/16W
R570	1-216-821-11	METAL CHIP	1K	5%	1/16W
R572	1-216-809-11	METAL CHIP	100	5%	1/16W
R590	1-216-845-11	METAL CHIP	100K	5%	1/16W
R594	1-216-845-11	METAL CHIP	100K	5%	1/16W
R595	1-216-845-11	METAL CHIP	100K	5%	1/16W
R599	1-216-821-11	METAL CHIP	1K	5%	1/16W
		< SWITCH >			
SW1	1-762-944-12	SWITCH, DETECTION (SMALL TYPE) (DOWN)			
		< VIBRATOR >			
X1	1-781-758-21	VIBRATOR, CERAMIC (CHIP TYPE) (10MHz)			
X2	1-781-759-21	VIBRATOR, CERAMIC (CHIP TYPE) (16MHz)			
**********					
*	1-680-703-11	SUB BOARD			
		**********			
	1-783-268-11	CABLE, FLAT 5P			
		< CAPACITOR >			
C501	1-163-038-11	CERAMIC CHIP	0.1uF		25V
		< CONNECTOR >			
CN502	1-750-862-21	PIN, CONNECTOR (PC BOARD) 5P			
		< DIODE >			
D501	8-719-069-54	DIODE UDZS-TE17-5.1B			
D503	8-719-988-61	DIODE 1SS355TE-17			

Ref. No.	Part No.	Description			Remark
		< IC >			
IC501	8-749-012-25	IC RS-170-TU			
		< DIODE >			
LED501	8-719-072-57	LED CL-170UB-X-T (DISC IN)			
LED503	8-719-072-57	LED CL-170UB-X-T (⏏)			
		< TRANSISTOR >			
Q501	8-729-216-22	TRANSISTOR 2SA1037K-T-146-S			
Q502	8-729-038-68	TRANSISTOR KRC103S			
		< RESISTOR >			
R501	1-216-035-00	METAL CHIP	270	5%	1/10W
R502	1-216-073-00	METAL CHIP	10K	5%	1/10W
R503	1-216-097-11	RES-CHIP	100K	5%	1/10W
R504	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R505	1-216-049-11	RES-CHIP	1K	5%	1/10W
R506	1-216-035-00	METAL CHIP	270	5%	1/10W
		< SWITCH >			
SW501	1-692-135-21	SWITCH, KEYBOARD (RESET)			
SW504	1-692-135-21	SWITCH, KEYBOARD (⏏)			
**********					
	A-3326-298-A	SWITCH BOARD, COMPLETE (INCLUDING SW900)			
		**********			
**********					
		MISCELLANEOUS			
		**********			
4	1-783-268-11	CABLE, FLAT 5P			
9	1-776-207-72	CORD (WITH CONNECTOR) (POWER)			
64	1-790-375-21	CORD (WITH CONNECTOR) (SUB OUT (MONO))			
65	1-777-246-41	CORD (WITH CONNECTOR) (ANT)			
119	1-677-340-11	FLEXIBLE BOARD			
* 251	X-3378-480-1	CHASSIS (OP) ASSY (INCLUDING M901)			
256	1-676-707-11	PICK-UP FLEXIBLE BOARD			
257	1-677-182-11	MOTOR FLEXIBLE BOARD			
⚠ 260	8-820-103-03	PICK-UP, OPTICAL KSS-720A/K1RP			
F901	1-532-877-11	FUSE (BLADE TYPE) (AUTO FUSE) 10A			
M601	X-3378-769-1	MOTOR ASSY (OPEN/CLOSE)			
M902	A-3301-985-A	MOTOR ASSY, SLED (SLED)			
M903	A-3315-039-A	MOTOR SUB ASSY, LO (LOADING)			
**********					
		ACCESSORIES & PACKING MATERIALS			
		**********			
	1-418-812-63	REMOTE COMMANDER (RM-X93)			
	3-044-623-02	LID, BATTERY CASE (for RM-X93)			
	3-227-558-11	MANUAL, INSTRUCTION (ENGLISH,FRENCH, SPANISH)			
	3-227-559-11	MANUAL, INSTRUCTION, INSTALL (ENGLISH, FRENCH,SPANISH)			
**********					

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
		**********	
		HARDWARE LIST	
		**********	
#1	7-685-790-09	SCREW +PTT 2.6X4 (S)	
#2	7-685-792-09	SCREW +PTT 2.6X6 (S)	
#3	7-627-850-28	SCREW, PRECISION +P 1.4X3	
#4	7-627-553-28	SCREW, PRECISION +P 2X2.5	
#5	7-624-102-04	STOP RING 1.5, TYPE -E	
#6	7-685-793-09	SCREW +PTT 2.6X8 (S)	
#7	7-628-253-00	SCREW, SPECIAL	
#8	7-685-104-19	SCREW +P 2X6 TYPE 2 NON-SLIT	
#9	7-621-772-00	SCREW +B 2X3	
#10	7-685-795-09	SCREW +PTT 2.6X12 (S)	
#11	7-627-553-37	SCREW, PRECISION +P 2X3 TYPE 3	
#12	7-627-553-17	SCREW, PRECISION +P 2X2 TYPE 3	
**********			
		PARTS FOR INSTALLATION AND CONNECTIONS	
		**********	
301	3-014-370-21	FRAME, FITTING	
302	3-916-012-01	BRACKET (ND), FITTING ASSIST	
303	7-682-160-01	SCREW +P 4X6	
304	X-3368-725-1	SCREW ASSY, FITTING	
305	X-3378-770-1	COLLAR ASSY	
306	3-030-929-03	SPRING, FITTING	
307	3-934-325-01	SCREW (+K 5X8 TP)	
308	1-776-207-72	CORD (WITH CONNECTOR) (POWER)	
309	3-048-118-01	KEY	



REVISION HISTORY

Clicking the version allows you to jump to the revised page.
Also, clicking the version at the upper right on the revised page allows you to jump to the next revised page.

Ver.	Date	Description of Revision
1.0	2001. 01	New